CORPUS DER MINOISCHEN UND MYKENISCHEN SIEGEL

BEIHEFT 5

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begründet von
FRIEDRICH MATZ

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Vorsitzender Bernard Andreae

herausgegeben von
INGO PINI und JEAN-CLAUDE POURSAT

BEIHEFT 5

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VORWORT DER HERAUSGEBER

Es ist nunmehr Tradition geworden, daß sich die an der Erforschung der bronzezeitlichen ägäischen Glyptik interessierten Wissenschaftlerinnen und Wissenschaftler aus aller Welt alle sieben Jahre anläßlich eines Symposiums zum intensiven Gedankenaustausch treffen. Während die drei ersten Symposien in Marburg stattfanden, hat sich Jean-Claude Poursat dankenswerterweise bereit erklärt, die vierte Tagung in der Universität von Clermont-Ferrand zu veranstalten.

Da die Teilnehmer des Symposiums von sehr unterschiedlichen Interessensgebieten aus den Zugang zum Forschungsgebiet der minoisch-mykenischen Glyptik finden, wurde das Thema nicht auf einen speziellen Bereich eingeengt. Dies spiegelt sich auch in der Vielfalt der in den einzelnen Beiträgen behandelten Themen wider. Von 22 eingeladenen Teilnehmern haben 20 ihre Beiträge zum Druck abgeliefert.

Die aufwendige Text- und Bildredaktion des Bandes lag wiederum in den bewährten Händen von Walter Müller, dem dafür unser ganz besonderer Dank gilt. Unterstützt wurde er von Thekla Happel, Alexander Hoppen, Stefan Klose, Andrea Mersch und Susann Schlesinger, denen wir gleichfalls danken.

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Für die ausgezeichnete Drucklegung sind wir der Universitätsdruckerei H. Stürtz AG in Würzburg zu Dank verpflichtet.

Im März 1995

INGO PINI – JEAN-CLAUDE POURSAT

VERZEICHNIS DER ABGEKÜRZTEN LITERATUR

AA	Archäologischer Anzeiger
AAA	Αρχαιολογικά Ανάλεκτα εξ Αθηνών
AbhMainz	Abhandlungen der Geistes- und Sozialwissenschaftlichen Klasse, Akademie der Wissenschaften und der Literatur in Mainz
Aegaeum	Annales d'archéologie égéenne de l'Université de Liège
AEphem	Αρχαιολογική Εφημερίς
AfO	Archiv für Orientforschung
AJA	American Journal of Archaeology
Alp, ZSK	S. Alp, Zylinder- und Stempelsiegel aus Karahöyük (1968)
AM	Athenische Mitteilungen
AnatSt	Anatolian Studies
AntK	Antike Kunst
ARepLondon	Archaeological Reports
ASAtene	Annuario della Scuola archeologica di Atene e delle Missioni italiane in Oriente
ASSA	T.G. Palaima (Hrsg.), Aegean Seals, Sealings and Administration, Aegaeum 5, 1990
BABesch	Bulletin antieke beschaving. Annual Papers on Classical Archaeology
BCH	Bulletin de correspondance hellénique
BerlJbVFrühGesch	Berliner Jahrbuch für Vor- und Frühgeschichte
Bertram, PoL	B. Bertram, Pride of Lions (1978)
BICS	Bulletin of the Institute of Classical Studies, University of London
BJb	Bonner Jahrbücher
Blegen, PN I	C.W. Blegen – M. Rawson, The Palace of Nestor I (1966)
Boardman, GGFR	J. Boardman, Greek Gems and Finger Rings. Early Bronze Age to Late Classical (1970)
BSA	The Annual of the British School at Athens
Buchanan, YBC	B. Buchanan, Early Near Eastern Seals in the Yale Babylonian Collection (1981)
Buchholz – Karageorghis, PGC	H.G. Buchholz – V. Karageorghis, Prehistoric Greece and Cyprus (1973)
CHIC	J.P. Olivier – L. Godart (avec la collaboration de J.-Cl. Poursat), Corpus Hieroglyphicarum Inscriptionum Cretae (im Druck)

ClR	The Classical Review
CMS	Corpus der minoischen und mykenischen Siegel (1964–)
CMS Beih. 0	F. Matz (Hrsg.), Die kretisch-mykenische Glyptik und ihre gegenwärtigen Probleme (1974)
CMS Beih. 1	I. Pini (Hrsg.), Studien zur minoischen und helladischen Glyptik. Beiträge zum 2. Marburger Siegel-Symposium, 26.–30. September 1978, Corpus der minoischen und mykenischen Siegel, Beiheft 1 (1981)
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EtCrét	Etudes Crétoises
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Evans, SM I	A. Evans, Scripta Minoa I (1909)
Frankfort, Cylinder Seals	H. Frankfort, Cylinder Seals (1939)
GGA	Göttingische gelehrte Anzeigen
Gill, KSPI	M.A.V. Gill, The Knossos Sealings: Provenance and Identification, BSA 60, 1965, 58ff.
Godart – Olivier, GORILA 1–5	L. Godart – J.-P. Olivier, Recueil des inscriptions en linéaire A, 1–5, EtCrét XXI (1976–1985)
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Hallager, MI	E. Hallager, The Master Impression. Studies in Mediterranean Archaeology LXIX (1985)

Hood, APG	S. Hood, The Arts in Prehistoric Greece (1979)
ILN	The Illustrated London News
Immerwahr, Aegean Painting	S. Immerwahr, Aegean Painting in the Bronze Age (1990)
Iraq	Iraq, published by the British School of Archaeology in Iraq
IsExplJ	Israel Exploration Journal
JARCE	Journal of the American Research Center in Egypt
JbZMusMainz	Jahrbuch des Römisch-Germanischen Zentralmuseums, Mainz
JCunSt	Journal of Cuneiform Studies
JEA	Journal of Egyptian Archaeology
JdI	Jahrbuch des Deutschen Archäologischen Instituts
JHS	Journal of Hellenic Studies
JNES	Journal of Near Eastern Studies
JPrehistRel	Journal of Prehistoric Religion
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Kanta, LM III	A. Kanta, The Late Minoan III Period in Crete. A Survey of Sites, Pottery and their Distribution (1980).
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OpAth	Opuscula Atheniensia
OxfJA	Oxford Journal of Archaeology
Papapostolou, Grammiki	J.A. Papapostolou – L. Godart – J.-P. Olivier, Γραμμική Α στο Μινωϊκό Αρχείο των Χανίων. Incunabula Graeca LXII (1976)
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Pepragmena 2	Πεπραγμένα του Β΄ Κρητολογικού Συνεδρίου, Α' (1968)
Pepragmena 4	Πεπραγμένα του Δ΄ Κρητολογικού Συνεδρίου, Α' (1981)
Pepragmena 5	Πεπραγμένα του Ε΄ Κρητολογικού Συνεδρίου, Α' (1985)
Pepragmena 6	Πεπραγμένα του ΣΤ΄ Κρητολογικού Συνεδρίου, Β' (1991)
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Prakt	Πρακτικά της εν Αθήναις Αρχαιολογικής Εταιρείας
PZ	Prähistorische Zeitschrift
RA	Revue Archéologique
RAVA	Reallexikon der Assyriologie und Vorderasiatischen Archäologie, IV 1983, VII (1987)
RendLinc	Atti dell'Accademia nazionale dei Lincei
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SIMA	Studies in Mediterranean Archaeology
SMEA	Studi micenei ed egeo-anatolici
Talanta	Τάλαντα. Proceedings of the Dutch Archaeological and Historical Society
TAW I	Ch. Doumas (Hrsg.), Thera and the Aegean World I. Papers Presented at the Second International Scientific Congress, Santorini, Greece, August 1978 (1978)
TAW III	D.A. Hardy u.a. (Hrsg.), Thera and the Aegean World III. Proceedings of the Third International Congress, Santorini, Greece, 3–9 September 1989: 1. Archaeology; 2. Earth Sciences; 3. Chronology (1990)

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UgaritF	Ugarit Forschungen
Vandier, Manuel IV	J. Vandier, Manuel d'archéologie égyptienne IV (1964)
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Weingarten, SSMC I	J. Weingarten, The Sealing Structures of Minoan Crete: MM II Phaistos to the Destruction of the Palace of Knossos. Part I: The Evidence until the LM IB Destructions, OxfJA 5, 1986, 279ff.
Weingarten, Zakro Master	J. Weingarten, The Zakro Master and his Place in Prehistory (1983)
WorldA	World Archaeology
Younger, Aegean Seals II	J.G. Younger, Aegean Seals of the Bronze Age: Masters and Workshops II. The First Generation Minoan Masters, Kadmos 22, 1983, 109ff.
Younger, Aegean Seals III	J.G. Younger, Aegean Seals of the Bronze Age: Masters and Workshops III. The First Generation Mycenaean Masters, Kadmos 23, 1984, 38ff.
Younger, Aegean Seals IV	J.G. Younger, Aegean Seals of the Bronze Age: Stylistic Groups IV. Almond and Dot-Eye Groups of the Fifteenth Century B.C., Kadmos 24, 1985, 34ff.
Younger, Aegean Seals V	J.G. Younger, Aegean Seals of the Bronze Age: Stylistic Groups V. Minoan Groups Contemporary with LM IIIA1, Kadmos 25, 1986, 119ff.
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Younger, Iconography	J.G. Younger, The Iconography of Late Minoan and Mycenaean Sealstones and Finger Rings, 1988
Yule, ECS	P. Yule, Early Cretan Seals: A Study of Chronology (1980)
ZA	Zeitschrift für Assyriologie

SYRIAN SEALS AND THE EVIDENCE FOR CULTURAL INTERACTION BETWEEN THE LEVANT AND CRETE

JOAN ARUZ

Recent spectacular finds of Minoan-style painted floors and walls at the sites of Tell el-Dab'a and Tell Kabri have focused attention on relations between Crete and other eastern Mediterranean sites toward the end of the Middle Bronze and the beginning of the Late Bronze Age. They add to the evidence for not only a Minoan presence on the Levantine coast and the Egyptian Delta, but also for the high value placed in these areas on Minoan art — already suggested in the imagery and style of some Levantine seals.

The glyptic documentation for interconnections between Crete and the Levant in the Middle to early Late Bronze Age occurs on both sides of the Mediterranean. Here I shall concentrate on two different phenomena. First I will discuss Syrian cylinder seals imported to Crete, which seem to have had some status for Minoans, valued enough to have been collected, in some cases re-cut to hide flaws, and deposited with their new owners in their graves alongside Minoan seals. [1] The second category of evidence includes 'eclectic' works of Syrian glyptic art displaying Aegean and Levantine features. These cylinder seals demonstrate the strong impact of Minoan style and iconography on the Levantine artistic tradition.

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* Source of illustrations: *Fig. 1a:* I. Pini, AA 1982, 601 Fig. 1; *Fig. 2:* A. Lembessi, Prakt 1967, 208 Pl. 192*α. γ; Fig. 3a:* J. and E. Sakellarakis, Archanes (1991) 107 Fig. 81; *Figs. 3b. 7b. 14 (photograph); 16a.b:* by courtesy of The Metropolitan Museum of Art; *Fig. 3c:* by permission of the Adana Museum; *Fig. 4b.:* by permission of the Heraklion Museum; *Fig. 5:* P. Amiet, La glyptique mésopotamienne archaique (1980) Pl. 130 No. 1758; *Fig. 6:* K. Emre, Anatolian Lead Figurines and their Stone Moulds (1971) Pl. VII,1a; *Fig. 8a:* I. Pini, MarbWPr 1977/78, Pl. 3; *Fig. 9:* H. Weiss (ed.), From Ebla to Damascus. Art and Archaeology of Ancient Syria (1985) Fig. 119 (Aruz photograph); *Fig. 10b:* O. Negbi, AJA 82, 1978, 144; *Fig. 11:* H. Seyrig, Ugaritica VI (1969) 479 Fig. 1 (Aruz photograph); *Fig. 12a:* Marinatos, AaR 62 Fig. 40; *Figs. 13–15:* D. Collon, UgaritF 13, 1982, 41 Figs. 1,6.7; 10; *Fig. 17:* B. Buchanan, Catalogue of Ancient Near Eastern Seals in the Ashmolean Museum I. Cylinder Seals (1966) Pl. 56 No. 897 (E); *Figs. 1a; 2; 8a.b:* from the archives of the CMS. Remaining photographs by the author.

[1] Two other phenomena shall not be discussed in this paper: Near Eastern imagery in Minoan art and the Minoan use of the Near Eastern cylinder seal form; see J. Aruz, The Aegean and the Orient: The Evidence of Stamp and Cylinder Seals (1986); H.-G. Buchholz in: G. Bass, Cape Gelidonya: A Bronze Age Shipwreck (1967) 148f.

Fig. 1a Mochlos cylinder seal. Heraklion Museum, Precious Metal Inv. No. 380.

Fig. 1b CMS II,3 No. 128.

Fig. 2 Heraklion/Poros cylinder seal. Heraklion Museum, Inv. No. 2347.

SYRIAN IMPORTS TO CRETE

The earliest known Syrian cylinder imported to the Aegean is made of a precious material and, while of rather crude execution, seems to be unflawed. This well-known silver seal was found in an Early Minoan context in a chamber tomb at the east Cretan site of Mochlos. [2] With its Syrian parallels in Early Dynastic Tell Chuera and Hama, it provides early evidence for Near Eastern contacts with an area of Crete that may have played an important role in east-west relations.

The Middle and early Late Bronze Age evidence, pertinent to our topic, includes two Syrian seals of late 19th—early 18th century B.C. manufacture that reached eastern and central Crete — Mochlos and Tylissos — in good condition. The Mochlos seal *(Fig. 1a)*, showing little wear, was found in a disturbed tomb that had EM II—MM IB/II pottery, indicating that it arrived close to the time of its manufacture; however, one cannot be sure when the unstratified seal from Tylissos *(Fig. 1b)* came to the Aegean. [3]

There is a wide distribution of seals with similar imagery and figure style in northern Syria at Alalakh, Chagar Bazar and Ugarit; in central Anatolia at Bogazköy, and in Palestine at Gaza and Balata, the latter an impression on a Canaanite jar. [4] Some of these seals were isolated by Schaeffer and later by Collon as members of a group that Collon attributes to Ugarit. [5]

An unfinished green jasper Syro-Palestinian seal, probably damaged in manufacture, came to Crete at a time relatively close to its production in coastal Syria-Palestine *(Fig. 2)*. Found in a rock-cut chamber tomb at Heraklion Poros that also contained gold jewelry and a number of Minoan seals, it came from the bottom of an ossuary pit in the thalamos dated by its pottery to the MM III—LM IA period. [6] This seal is of interest both because it belongs to a

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[2] I. Pini, AA 1982, 599f.; J. Aruz, Kadmos 23, 1984, 186f.

[3] The main occupation of the site occurred in LM I, but there is also habitation in LM II–III. The seal is reported to have been found "in the late phase of the excavation through sieving of the earth": J. Hazzidakis, Les villas minoennes de Tylissos, EtCrét 3 (1934) 106f.; E. Möller in: J.G.P. Best and N.M.W. de Vries (eds.), Interaction and Acculturation in the Mediterranean: Proceedings of the Second International Congress of Mediterranean Pre- and Protohistory (1980) 94; Buchholz (supra n. 1) 156 No. 40.

[4] D. Collon, The Alalakh Cylinder Seals – A New Catalogue of the Actual Seals excavated by Sir Leonard Woolley at Tell Atchana, and from Neighboring Sites on the Syrian-Turkish Border (1982) 56f. No. 22; H. el Safadi, UgaritF 6, 1974, Pl. XII Nos. 86. 89; T. Beran in: Bittel et al. (eds.), Vorderasiatische Archäologie. Studien und Aufsätze. Anton Moortgat zum 65. Geburtstag gewidmet (1964) 35 Pl. 8,4; A. Rowe, A Catalogue of Egyptian Scarabs, Scaraboids, Seals and Amulettes in the Palestine Archaeological Museum (1936) 4. 234f. Pl. 26; J. Nougayrol, Cylindres-sceaux et empreintes de cylindres trouvés en Palestine (1939) 49f. Pl. 8 S.B.1; Schaeffer-Forrer, Corpus I 30. 34 RS 9.888 for females, 9.300 for nude belted male; W.M.F. Petrie, City of Shepherd Kings. Ancient Gaza V (1952) Pl. IX,33; see now also the seal found at Tell Kabri in northern Israel, which bears some features similar to the examples found on Crete: A. Kempinski in: M. Mellink – E. Porada – T. Özgüç (eds.), Aspects of Art and Iconography: Anatolia and its Neighbors. Studies in Honor of Nimet Özgüç (1993) 334f.

[5] D. Collon in: J. Tubb (ed.), Palestine in the Bronze and Iron Ages. Papers in Honour of Olga Tufnell (1985) 58.

[6] A. Lembessi, Prakt 1967, 195f. 201. 208; according to the excavator the seal comes from an undisturbed layer of MM IIIA pottery, although the pit also contained MM IIIB–LM IA material; P. Warren – V. Hankey,

well-known Levantine seal workshop and because of its imagery. The three-figured scene with gods flanking a king has suggested to the Egyptologist Ogden Goelet the Egyptian ritual of purification where, just as the sun god was washed (by the waters) before appearing each morning, his living embodiment, the Pharaoh, was washed by lustrators who impersonated the divinities Horus and Seth (or Thoth), wearing animal masks. [7]

Fig. 3a Archanes cylinder seal.
Heraklion Museum, Inv. No. 2374.

Fig. 3b Syrian cylinder seal.
(ex Moore collection)

Fig. 3c Cylinder seal in Adana Museum.

Aegean Bronze Age Chronology (1989) 63, assign MM IIIB–LM IA phase – known from a deep level in the pit and from the forechamber – as the time of the construction of the tomb; architecturally the tomb type, with a narrow dromos, prothalamos and large main chamber, seems to fall between MM burials at Mavrospelio and chamber tombs of LM II type; other finds in this tomb include gold ornaments (one ring has a geometric design like one in the Aigina Treasure), necklaces of gold, sard, rock crystal, faience and glass paste beads, a number of Minoan seals, a bronze knife, and boars' tusks.

7 H. Blackman, JEA 5, 1918, 117, who notes that the chief embalmer wore a jackal mask, impersonating Anubis; for the Egyptian gesture of address, see E. Brunner-Traut in: Lexikon der Ägyptologie II (1977) 575 lc.

This Syrian translation of an Egyptian theme is one of a number of variations of similar figures on the distinctive group of green jasper cylinder seals — some with royal themes, some with Egyptian hieroglyphs. On the Poros seal, the king wears a robe with rolled borders, which is wrapped diagonally around his body, related to garments worn by figures on Alalakh sealings, a Canaanite plaque, and Hyksos scarabs. [8] Next to his hand is an object resembling a Syrian MBA crescent-hafted dagger. [9]

The 'Green jasper' group was first isolated by William Ward as Syro-Palestinian and later attributed by Dominique Collon to a coastal Syrian workshop, perhaps at Byblos. [10] While the seals are widely distributed in time and space, with examples found in Syria (Alalakh VII, MB Byblos), Palestine (Tell Beit Mirsim, 17th century context, Tell Ajjul with one example in 18—19th Dynasty context), Cyprus (Kition in a 13th century tomb, Klavdia), and as far as Carthage, the latter found in a first millennium Punic tomb, the date for the manufacture of the group may be the early 17th century B.C. — a date within one or two generations of the time of deposition in the grave at Poros. [11]

In addition to seals imported both in good condition and in unfinished, flawed condition, there are some that appear to have been recarved on Crete. A small lapis lazuli cylinder seal *(Fig. 3a)* was found in Funerary Building 5 of the Phourni necropolis at Archanes, occupied probably through the protopalatial period, with many of its seals datable to EM III—MM I. [12] The cylinder seal was discovered along with a large number of pithoi containing skulls and two larnakes, a bronze pin, gold and stone beads, and an ivory(?) amulet. [13] The material of the seal, a medium blue lapis lazuli stone with white calcite inclusions indicating lesser quality, together with the proportions of the cylinder seal and string hole persuade me that it was originally a Syrian cylinder. Nearly identical Syrian pieces exist. [14]

Depicted on the seal is a single male figure, facing left in the impression. He may be wearing a cap on his head and his short kilt-like garment is marked with two diagonal lines. He strides forward with his right arm extended, elbow slightly bent, holding a staff. His left

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8 D. Collon in: M. Kelly-Buccellati et al. (eds.), Insight through Images: Studies in Honor of Edith Porada (1986) 66f.; P. Beck, IsExplJ 33, 1983, 78f.; P. Matthiae in: W. Orthmann, Propylaen Kunstgeschichte 14. Der Alte Orient (1975) 486 Fig. 157; O. Tufnell, AnatSt 6, 1956, 68; for the figure in conical cap, see D. Hansen, AJA 73, 1969, 283.

9 Y. Yadin, The Art of Warfare in Biblical Lands I (1963) 140f.; A. Gardiner, Egyptian Grammar (1988) 511 T8.

10 W. Ward, Syria 42, 1965, 35f. who, in relating these seals to SIP scarabs, recognized similar combinations of hieroglyphic signs in both groups; Collon (supra n. 8) 57f.

11 MM III–LM IA; I. Ström in: Best and de Vries (supra n. 3) 105, is more prudent in calling the context for the cylinder LM I, with a 15th century B.C. terminus; she then concludes – perhaps erroneously – that we could have a two hundred year gap between the date of manufacture and the date of deposition in the tomb. See also n. 57 for discussion of chronology.

12 J. and E. Sakellarakis, Archanes (1991) 106f. Fig. 81; J. Sakellarakis, Prakt 1967, 159f. Pl. 152; Prakt 1972, 319f.; see Pini (supra n. 2) 603.

13 Sakellarakis (1991 supra n. 12) 106; Sakellarakis (1967 supra n. 12) 159f. Pl. 152: in one of these were found beads of gold, sard, and probably imported amethyst.

14 H. 1.5 cm; for a seal of nearly identical material and proportions, see M. Noveck, The Mark of Ancient Man. Ancient Near Eastern Stamp Seals and Cylinder Seals — the Gorelick Collection (1975) 38 No. 22.

arm is bent toward the waist and he holds in this hand a crook-like object, perhaps for ritual or ceremony, visible over the left shoulder. The rest of the field is taken up by a geometric pattern of an X filled with tiny palm leaves and a vertical lattice pattern filled with discs.

Sakellarakis has suggested a Syrian source for such a representation. [15] Both in MBA Syria and Anatolia we find striding male figures carrying staffs, crooks or spears and wearing kilts or robes *(Fig. 3b)*. [16] We also find a similar X pattern dividing the field, filled with small chip-carved incisions, on a Cilician seal in the Adana Museum *(Fig. 3c)*. Certain details, however, have no foreign parallels. In particular, the tiny palm leaves that fill the X motif can be paralleled on a number of Minoan late prepalatial seals, for instance a loop-handled cylinder seal from Archanes. [17] The slight arch of the man's back and the angle of his head add a dynamic thrust to his stride and are consistent with Minoan rather than Near Eastern style. [18] However, the allusion to Syrian imagery, added to the poor state of the surface, could point to the re-cutting of this seal. [19]

Our best evidence for the re-working of a Near Eastern seal by a Minoan craftsman comes from Knossos, where a lapis lazuli cylinder seal with gold caps was discovered during the excavations of the northwestern area of the palace *(Fig. 4)*. [20] The dating of the findspot is controversial, due to discrepancies in the original reports and the evidence of later sherds mixed with MM IIIA material. [21]

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[15] Sakellarakis (1991 supra n. 12) 106f.; Sakellarakis (1967 supra n. 12) 159f.; Sakellarakis (1972 supra n. 12) 319f.

[16] For other Syrian seals with a male figure striding with a staff or spear in hand, see E. Williams-Forte, Ancient Near Eastern Seals — A Selection of Stamp and Cylinder Seals from the Collection of Mrs. William H. Moore. The Metropolitan Museum of Art (1976) No. 25; H. von der Osten, Ancient Oriental Seals in the Collection of Mr. Edward T. Newell (1934) Pl. XXII No. 309 (second figure with crook). In Anatolia we also find later Hittite renderings of a male figure in a very similar posture: D.G. Hogarth, Hittite Seals (1920) No. 313.

[17] Sakellarakis (1967 supra n. 12) 160, mentions these tiny leaves; for parallels, see CMS II,1 Nos. 226. 242. 311. 450; II,2 No. 70.

[18] Evans, PM IV 414 Fig. 343c; a male may be represented with a spear or staff on the Knossos Town Mosaic: Evans, PM I 309 Fig. 228t; for another discussion of the Archanes lapis lazuli seal, see V.E.G. Kenna, KretChron 21, 1969, 352f.

[19] Two other cylinder seals were found in the upper stratum of tholos E at Archanes, one a hematite seal with a geometric design paralleled on Minoan stamp seals, and the second a faience seal with traces of a linear pattern; both may have been foreign seals, the former probably carved or re-carved on Crete: J. Sakellarakis in: Pepragmena 4, 523 Fig. 6. 10. 11 Pl. 177; 178,1.2; Sakellarakis (1972 supra n. 12) 319f.

[20] CMS II,2 No. 29.

[21] In the Palace of Minos, Evans says that the seal was found "...40 centimetres deeper than the M.M. IIIa stratum, in the 'Initiatory Area' just beyond the western border of the 'North Lustral Basin'..." (Evans, PM IV 423). The lustral basin floor "was covered by a stratum containing remains of clay and stone vessels of forms which...must be regarded as characteristic of M.M. IIIa" (Evans, PM I 411). Evans also mentions the discovery of the stone lid with the cartouche of the Hyksos king Khyan, "...which stands in inseparable connexion with the actual contents of the Lustral Basin" (Evans, PM I 417f.). Whereas the chronology of the seal appears relatively certain in the publication, this is not so clear in Evans' earliest report of these finds in BSA 1901, where a Late Bronze Age rubble wall is described as 40 cm above the Khyan lid stratum; the seal is reported to come from rubble at the base of the western side of a cistern behind the bath, and two and a half meters from the spot where the lid was found. L. Palmer, The Penultimate Palace of Knossos (1969) 54f.; L. Palmer, Kadmos 20, 1981, 112f. 127, gives a different account of the pottery belonging to the same lot as the Khyan lid, and assigns one sherd to

The cylinder seal's appearance poses as many problems as its context. Evans, early on, astutely recognized that the seal "while fitting on to the 'Syro-Hittite' class, shows certain early traditions that go back to the days of Sargon of Akkad". [22] Collon, like myself, has recognized features related to the school of Ebla, [23] and Möller has concluded that it is a product of "one of the Anatolian cities during the Old Assyrian colony period", noting "the confusing medley of elements from different contemporary styles". [24] The seal merits closer attention.

It is made of high quality purple-blue lapis lazuli, without visible white calcite inclusions. This particular shade of lapis lazuli was favored in Mesopotamia, as Porada has pointed out, [25] and the material is most frequently used in the Early Dynastic period — although examples also occur in later periods. [26] The large dimensions of the seal (H. 2.8 cm; D. 1.3 cm) are more characteristic of the third than the early second millennium B.C.

Fitted onto the ends of the Knossos cylinder seal are two finely-made gold caps of unusual design *(Fig. 4)*, probably replacements for original Near Eastern caps. They are distinguished by a circle of granulation around the string hole and by a short tube that extends part-way into the hole to strengthen the fastening. Neither of these features, to my knowledge, occur on Near Eastern gold caps. We do, however, have Late Bronze Age parallels on the Greek mainland for a much thinner gold tube that fits into the string hole for attachment to two separate gold caps that may have granulation. [27]

LM IIIA, while the others are MM III. On this basis, he dates the stratum which Evans calls MM IIIA to the time of the late sherd, making the Khyan lid, Egyptian stone vases, and the cylinder seal heirlooms, which were deposited much later than their dates of manufacture. M. Popham, The Destruction of the Palace at Knossos, Pottery of the Late Minoan IIIA Period, SIMA XII (1970) 41f., confirms that the deposit is mixed and in his list of pottery from the final phase of the palace, notes LM IIIA material in a lot from this area. The matter of stratigraphy is extremely confusing, with the possibility of foreign goods coming in during the Hyksos period or sometime in the New Kingdom.

22 Evans, PM IV 424.

23 Aruz (supra n. 1) 632; Collon, First Impressions 38f. No. 130.

24 Möller (supra n. 3) 97ff.

25 E. Porada, AfO 28, 1981/82, 6.

26 Two Syrian (or 'Syrian Colony' style) seals, which should date to the 19th century B.C., are examples from the Tôd Treasure: E. Porada in: M.A. Dandameyev et al. (eds.), Societies and Languages of the Ancient Near East – Studies in Honour of I.M. Diakonoff (1982) 286 Fig. 3, and one example is in the Gorelick Collection: Noveck (supra n. 14) 38 No. 22; lapis lazuli is a rare material for Anatolia (see N. Özgüç in: Ancient Anatolia. Aspects of Change and Cultural Development. Essays in Honor of Machteld J. Mellink (1986) 48, for a lapis lazuli example from Acemhöyük), where in the early second millennium, as in Syria, the favored material is hematite.

27 E. Porada in: Acts of the International Archaeological Symposium 'The Relations between Cyprus and Crete, ca. 2000–500 B.C.' (1979) 111f. Fig. 2, has already noted this type of Aegean gold mount in her study of a Cypriot lapis lazuli cylinder seal from Thebes; she lists Late Bronze Age parallels for this type on two glass seals, one a cylinder seal from Kasarma; there are a number of stamp seals embellished in this manner (for a list of seals with gold tubes and caps, see J. Younger, Chronology 197, and we have two sets of caps and tubes preserved in the Vapheio and Menidi tombs, without their seals: H. Lolling et al., Das Kuppelgrab bei Menidi (1880) Pl. V,1; for caps with granulation, see CMS I No. 205; for a gold seal with granulation near string hole, see CMS I No. 274.

This evidence persuades me that a Minoan craftsman, seeking to restore the seal to its original beauty, made a fine sturdy set of caps and created a method for holding them in place — a method which is related to but differs from the system I know of on the Greek mainland. As we shall see later in the discussion, this may not be the only Minoan addition to this foreign cylinder seal.

Fig. 4 CMS II,2 No. 29 with detail of gold caps.

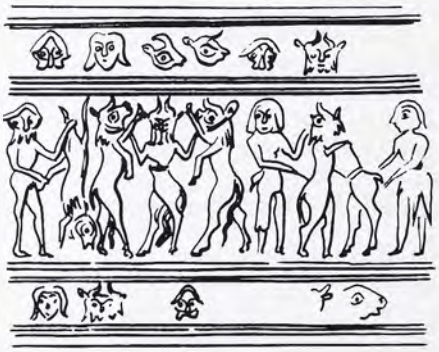

Fig. 5 Ebla sealing.

Fig. 6 Anatolian stone mould.

The design on the Knossos cylinder seal is composed of two registers in an orderly scheme achieved without use of a dividing line. Larger figures below have their feet on the bottom border, and smaller figures above barely fit into the area that is not covered by the gold caps. A similar syntax of rows of figures organized with or without added horizontal lines occurs on Syrian seals and sealings, both in the third and early second millennia. [28]

[28] Noveck (supra n. 14) 38 No. 22; E. Porada, Corpus of Ancient Near Eastern Seals in North American Collections. The Collection of the Pierpont Morgan Library (1948) No. 936; P. Amiet, La glyptique méso-

The main scene consists of a rather incoherent juxtaposition of bulls, lions, a bullman, and a frontal deity in a flounced garment. Although based on the Early Dynastic contest, inconsistencies in both style and composition lead to the conclusion that the scene was re-cut, perhaps a number of times.

The original layout must have resembled the composition on sealings from Ebla *(Fig. 5)*. The lions and two bulls in profile, however, have the ample proportions and body treatment that may be more characteristic of an early second millennium re-cutting. [29] This re-cutting may have occurred in Syria or in central Anatolia, [30] based on the evidence of the head of the bullman, which looks like one of the heads of figures preserved in Anatolian stone moulds for lead figurines. Female figures on these moulds, as well as on some Syrian seals, resemble the female deity depicted on the seal *(Fig. 6)*. Faint curls appearing near her head may belong to an earlier design over which the figure was re-cut.

The small figures in the upper register include a sphinx paralleled on Syrian-style seals from Kültepe IB; [31] a Syrian griffin-demon; [32] a winged lion griffin — a creature of the weather god both on Akkadian and MB Syrian seals; [33] the lion protome, paralleled both on Anatolian and Syrian seals; [34] a tiny human head; and a Near Eastern sun disk.

While the design and most figural elements can be accounted for in the art of Syria and Anatolia, [35] there is an exception. This is the frontal bull that crosses behind one lion *(Fig. 7a)*, its forequarters next to the frontal deity — one of the most enigmatic figures on the Knossos cylinder. The animal's enormous head seems unrelated to the body below it and

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potamienne archaique (1980) Pl. 130,1756. 1758; this contrasts with many Anatolian-style seals where motifs are usually dispersed all over the field: N. Özgüç, The Anatolian Group of Cylinder Seal Impressions from Kültepe (1965) Pl. XIX,56 and Pl. XXI,63 for example; one early second millennium seal in the Erlenmeyer Collection: M.-L. and H. Erlenmeyer, Kadmos 4, 1965, Fig. 5 opp. p. 3, combines the Early and Old Syrian-type syntax of an upper register of small figures with the lower main scene, but also has animal and human protomes all over the field to create the typical busy picture that we find on Anatolian-style seals.

29 LION HEAD TYPE: P. Amiet, Syria 40, 1963, Pl. VI,1; Frankfort, Cylinder Seals 243 Fig. 76; FUR AND MANES: Buchanan, YBC Nos. 969. 980. 1110 (Cappadocian); Porada (supra n. 28) Nos. 356. 364. 366. 367E; P. Garelli – D. Collon, Cuneiform Texts from Cappadocian Tablets in the British Museum Part VI (1975) 54; Özgüç, SSI 41 Pl. XIXA; STRIATIONS ON BODY: F. von Luschan, Die Kleinfunde von Sendschirli. Ausgrabungen von Sendschirli V (1943) Pl. 39a; Özgüç (supra n. 28) passim; Möller (supra n. 3) 99.

30 For parallels, see Özgüç, SSI Pl. XXII,2; H. de Genouillac, Ceramique cappadocienne I (1926) Pls. A4 (A.O. 9390). B2 (AO 8750). B4 (AO 9384); Möller (supra n. 3) refers to B. Hrozny, Inscriptions cunéiformes du Kultépé I (1952) Pls. LVII,21a. LXII,27a side b; HORNS: Collon, SITA Pl. XI; Safadi (supra n. 4) Pl. XIV,105.

31 Özgüç, SSI Pl. XVD.

32 This figure was misinterpreted by Platon – Pini – Salies, CMS II,2 S. 37f.; the correct identification is made by Möller (supra n. 3) 98; it is possible that the undecipherable figure between the sun disc and lion protome on the Knossos seal, with wing-like appendage and curl, could also be a griffin-demon.

33 Frankfort (supra n. 29) 174f.; in its ferocious aspect, the lion-griffin may have its mouth open, roaring or biting, and is a rampant combatant with both human and animal adversaries: B. Goldman, AJA 64, 1960, 321 Pl. 89.

34 Möller (supra n. 3) 98.

35 Möller (supra n. 3) 99, suggests Karahöyük as the place for this style: see Alp, ZSK Pls. 44. 107; for a similar treatment of the hands on Old Assyrian style sealings from Kültepe, see for example, Garelli and Collon (supra n. 29) Pls. 50,21.23; 55; 60; 64.

makes little sense as an image. [36] The outline formed by the incurved horns can be found on Near Eastern divine headgear and bovine divinities. [37] It is likely that this head was re-cut on Crete, perhaps over an original Near Eastern head of a human-headed bull *(see Fig. 7b for one example)*; its beard may have been transformed into the elongated Minoan muzzle, which is placed directly above the foreleg. There is no neck in this re-cut version. Traces of an earlier design appear in the lines that resemble an animal limb, extending from below the elbow of the female to the bovine front leg.

Fig. 7a CMS II,2 No. 29. Detail.

Fig. 7b Early Dynastic cylinder seal (ex Moore Collection, Metropolitan Museum, Anonymous Loan, 1992: No. L.1992.23.3)

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36 The closest parallels in the Near East for this head are small clay sculptures from Byblos: M. Dunand, Fouilles de Byblos I, 1926–32 (1939) Pl. LXXXIII, 4377. 5261 (considered by Dunand to be Middle Minoan imports to Syria); LM Aegean bucrania on seals include CMS X No. 68; K. Mavriyannaki, AAA 10, 1978, 203 Fig. 8.

37 C.L. Woolley, Ur Excavations II. The Royal Cemetery (1934) Pl. 121; for Anatolian bulls with profile human heads and incurved horns, see I. Spar (ed.), Cuneiform Texts in The Metropolitan Museum of Art I (1989) MMA 66.245.21b: seal No. 33 Pl. 129.

To summarize our findings, we begin with a good size lapis lazuli cylinder seal of fine quality and a color preferred in the Near East, certainly in the third millennium. It bears a later echo of the standard contest frieze and subsidiary register seen on Ebla sealings, and it is possible that a nude bearded hero or bullman once stood in place of the frontal female, confronting a human-headed bull. Re-cutting could have occurred in central Anatolia, but damaged areas may have required Minoan re-working and the addition of the incongruous bucranium. The seal was further beautified with replacement Minoan gold caps — work of the MM or LM period.

Fig. 8a Hagia Triada Sealing.
Heraklion Museum, Inv. No. 508.

Fig. 8b Chania Sealing.
CMS V Suppl. 1A No. 130.

In attempting to understand the significance of these Syrian imports to the Aegean, I illustrate two sealings: one from Hagia Triada *(Fig. 8a)* with an impression of a foreign seal and one from Chania *(Fig. 8b)*, impressed by a Minoan cylinder seal. Both were not rolled in the oriental manner but rather, like Aegean seals, were stamped, so that the cylindrical outline and one face of the carving is visible. Therefore, there was no particular appreciation in the Aegean of whatever functional requirements prompted the shift from stamp to cylinder seal in Mesopotamia and Syria. There was also no dominating foreign presence in Crete as there was in central Anatolia during the Assyrian Colony period, to influence local merchants to switch to the use of cylinder seals — and while the cylinder seal form was used sporadically by Aegean seal carvers, Near Eastern seal compositions had no major impact on Cretan seals.

Some imports, such as the hematite seal from Mochlos, are good quality seals in good condition and came to Crete close to the time of their manufacture — perhaps with Syrian traders, who may have also brought similar seals to Palestine and Anatolia. [38] Others were either re-cut, noticeably chipped, or unfinished — and were perhaps easier for Minoan

[38] A seal with figures related to those on the Tylissos example was possibly used by a Syrian merchant at Kültepe: Özgüç, SSI Pl. XXVI,3.

travellers to acquire. [39] The seal from Heraklion-Poros belongs to a large group of seals from one workshop that were distributed over great distances and in some cases retained for centuries.

Imported cylinder seals on Crete were considered fitting grave goods, and placed in burials. [40] They may have been valued as exotica and appreciated for their materials. The Mochlos silver cylinder seal is one of a number of silver objects found in the tombs at that site. The Knossos seal is made of a very desirable lapis lazuli (a material known to have been collected in antiquity) and was restored to an impressive piece of jewelry on Crete.

I now turn to our second category of evidence.

MB—EARLY LB SYRIAN CYLINDER SEALS WITH MINOAN ELEMENTS

Whereas on Crete we have imported Syrian seals that do not seem to have fundamentally affected Minoan style or composition, the situation is different in Syria. Here we have no known imported Minoan seals. However, there are numerous Syrian seals bearing 'eclectic' imagery and styles that may indicate cultural interaction between the two regions, however hard to interpret. I shall discuss only a few. Nylander, in his study of artistic interaction between Greeks and Persians at Pasargadae, makes the distinction between similarities in iconography and stylistic elements that can be borrowed and modified by local artists, and structure or underlying principles that are conditioned by "the entire mental set of a culture" and are "most difficult to transmit unchanged to another context". [41] In analyzing Achaemenid and archaic Greek drapery folds, he sees a structural difference "of fundamental attitudes" where the relationship between body and drapery in Greek art was never of interest to the Persian artist. [42] Similarly, an essentially Minoan structure is lacking on most 'eclectic' Syrian seals; however, these seals are of interest for the way in which they juxtapose foreign elements with the more Mesopotamian-derived Syrian repertoire.

One particularly interesting example demonstrates the excerpting of an Aegean motif by a Syrian seal carver. [43] This seal, found at Ugarit *(Fig. 9)*, is not published with any specific findspot or associated finds and has been stylistically dated to ca. 1700—1500 B.C. It is made of white stone [44] and is fitted with plain gold caps of Near Eastern type. Its design shows a juxtaposition of oriental and Minoan motifs.

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39 The Platanos cylinder seal, CMS II No. 306, an early Old Babylonian import, may also have been chipped.

40 Found in treasuries or graves, cylinder seals throughout history have been collectible objects – with examples found in Mycenaean Thebes, alongside Aegean stamp seals, and in Punic and Roman graves in North Africa and Italy, and even as part of the treasure brought back to Italy by the Crusaders: Collon (supra n. 23) 138.

41 C. Nylander, Ionians in Pasargadae (1970) 75.

42 Nylander (supra n. 41) 137.

43 H. Weiss (ed.), From Ebla to Damascus. Art and Archaeology of Ancient Syria (1985) 279 No. 120.

44 Measurements: H. 2.2 x 0.85 cm; there is some question about the material identification and there seems to be an impression of woven cloth on the surface (noticed by Terry Drayman-Weisser, Director, Division of Conservation and Technical Research, The Walters Art Gallery, Baltimore) that has yet to be explained.

The entire body of the cylinder is ringed by an alternation of open and closed lotuses forming a chain. While the pattern has been compared with refined LBA Mitannian-style examples, [45] the motif, in a less delicate and less elegant form, is introduced on a sealing from Alalakh VII, filling the entire field. [46] A Kamares ware sherd from Ugarit has a similar design – perhaps itself an eclectic piece. [47]

Fig. 9 Ugarit cylinder seal.

Fig. 10a CMS II,5 No. 258.

Fig. 10b Jug from Toumba tou Skourou.

Perched above the pendant lotuses on the Ugarit cylinder seal are two animals: a griffin and a goat. The former has a crest, a raised wing with bent profile, and a couchant posture which could relate it to the Aegean, but in the case of the goat there can be little uncertainty.

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45 B. Parker, Iraq XI, 1949, Pl. II,12; H. von der Osten, Ancient Oriental Seals in the Collection of Mrs. Agnes Baldwin Brett (1936) Pl. IX,99; see Weiss (supra n. 43) 279 No. 120.

46 Collon (supra n. 30) 90 No. 164.

47 C. Schaeffer, Ugaritica II (1949) 256 Fig. 109a.

Similar goats with heads bent downward and legs placed close together occur already in the MM II period on a Kamares pot and on a sealing from Phaistos *(Fig. 10a)*. A Minoan cushion seal depicting a dog below a cliff on which stands a goat in similar posture probably dates to the period of the Ugarit seal. [48]

The scheme of composition, with animals balancing on a lotus chain devoid of stems, finds its closest parallel on a Tell el Yahudiyeh ware jug of the pictorial class, from Toumba tou Skourou on Cyprus, where waterbirds are depicted *(Fig. 10b)*. This site is important for its LM I imported pottery and other evidence of foreign contacts, such as Syrian pottery and ostrich eggs. The vessel relates to examples from both the Levant and Egypt, particularly to the well-known el Lisht vase with waterbirds and dolphins (of MB IIB Syro-Palestinian shape and datable to Dynasties XIII–XV). [49] Negbi attributes the Cypriot find to Levantine or Cypriot manufacture. [50] While the decoration on these pictorial vessels may relate to the designs on the Ugarit seal, the carver did not place Egyptian or Syrian birds on flowers, but chose from the Minoan repertoire.

Other better known Syrian seals, as has been pointed out in the literature, depict Minoan-looking subjects in lively postures — such as long-haired figures in loin cloths and bull-leaping scenes in the context of bull-hunting and bull-sport. One hematite Syrian seal now in Vienna *(Fig. 11)*, depicts two young warriors with well-modelled bodies, long hair, wasp-waists, broad shoulders, in striding postures, one figure with a hyper-extended back leg. [51] They are clad in loincloths with belt tassels hanging between their legs. Armed with daggers and spears, they approach an enthroned figure with feet resting on the head of a lion. Behind the seated figure is a rampant griffin, with its hindlegs on the back of a throne and forelegs on a goat. In the field are a crescent moon and a cartouche that may read "Gb". [52]

With the publication of the frescoes from Thera Xeste 3, we have a surprisingly close parallel for the composition on the Vienna seal *(Fig. 12a)*. [53] The painting shows a female in a long flounced skirt, seated on a rectangular stool. She is probably the Minoan goddess. The

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48 Boardman, GGFR Pl. 61.

49 Like a piece from Byblos, its design shows the flower extracted from its stem but, in the style of an example from Abydos, the rendering is graceful and elegant rather than geometrically precise. Scholars agree that the motifs of papyrus and waterfowl are Egyptian — Goelet noting how un-Egyptian some waterfowl look, but differ in their judgment regarding the place of manufacture of individual pots found in Egypt and the Levant: R. Amiran, IsExplJ 7, 1957, 93f.; Ancient Pottery of the Holy Land (1969) 118f.; R.S. Merrillees, Levant 4, 1976, 193f.; for the Lisht jug, see B. Kemp – R.S. Merrillees, Minoan Pottery in Second Millennium Egypt (1980) 220ff., who date the jug to Dynasty XIII/early Dynasty XV; H. Kantor, Chronologies in Old World Archaeology (1965) 23f.; V. Hankey – P. Warren, BICS 21, 1974, 145; P. Warren – V. Hankey (supra n. 6) 135f., who compare it to a pictorial juglet from stratum E2 at Tell el-Dab'a, dating it to the early Hyksos period; J. Weinstein, JARCE 19, 1982, 159f. n. 2, who dates the form to MB IIB.

50 O. Negbi, AJA 82, 1978, 143f.

51 H. Seyrig, Ugaritica VI (1969) 479 Fig. 1; E. Bleibtreu, Rollsiegel aus dem Vorderen Orient (1981) 69f. No. 83 (H. 1.6 cm; D. 0.8 cm); Seyrig points to a closely related second seal on which long-haired hunters attack a lion; here their extended legs produce more exaggerated postures.

52 I thank James Allen and Marcia Hill of the Egyptian Department, The Metropolitan Museum of Art, for suggestions on the reading. I hope to look further at the cartouches of this and other seals of similar style.

53 Marinatos, AaR 62 Fig. 40.

setting is architectural, with the figures raised on a series of platforms. The deity extends her hand toward an attendant monkey, who ascends from the lowest platform; behind her is a rampant griffin with a sickle-shaped wing, its hindlegs on a low platform and forelegs on the back of her seat. Other human attendants approach from left and right.

Fig. 11 Vienna cylinder seal.

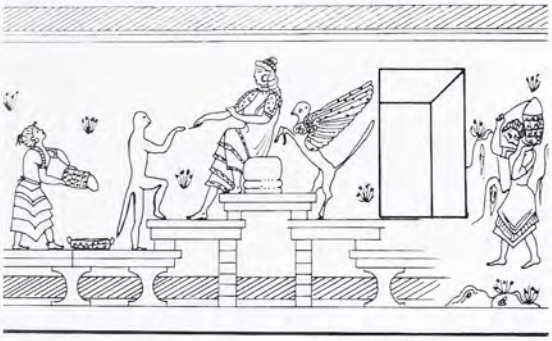

Fig. 12a Drawing of fresco detail from Thera, Xeste 3.

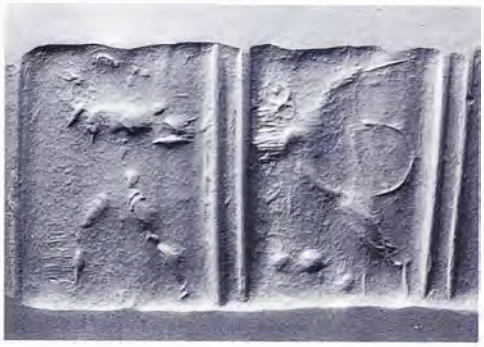

Fig. 12b CMS II,3 No. 328.

Regarding the imagery on the seal, the youths may be designated as foreigners, with their Minoan hairdos and garments. They are carved in a style that recalls Egyptianizing figures in Syrian art. In particular, their squared shoulders and slender bodies relate them to the human and divine figures that appear in the 'green jasper' group discussed above. One member of this group, the seal imported to Poros, has a monkey-hybrid figure that has been cited by Nanno Marinatos as a parallel for the monkey figure on the Thera Xeste 3 fresco. [54]

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54 College Art Association Symposium 2 (1986).

The youths on the Vienna seal have long strands of hair over their shoulders, and a 'topknot'; on Crete we usually see short curly forelocks. The squared-off mass of hair that falls down the back recalls Egyptian wigs and representations of the men of Keftiu. A number of 18th–early 17th century Syrian seals depict related figures.

After the youths on the Vienna seal, the griffin comes closest to Aegean prototypes. This creature is extended with forelegs on the throne. Its posture finds parallels on an LM I cylinder seal *(Fig. 12b)* and on LM I palatial seal impressions, where we also find the three-pronged plume, spiral chest curl and bent wing – all diagnostic features of the Minoan griffin. [55] The Vienna griffin stands on a very Syrian-looking goat with its head reversed. It counters the seated figure with feet on a lion. Such a placement of figures on their animal attributes is well known on Near Eastern seals.

The seated warrior deity on the Vienna seal holds a drawn sword with blade raised in an unusual gesture and has long strands of hair hanging both over the shoulder and down the back – recalling Aegean hairdos. The figure wears a Near Eastern-looking wrapped long garment, however, with an unusual zigzag pattern.

The new evidence of Minoan-style miniature paintings from Tell el-Dab'a provides us with nearer chronological parallels [56] for well-known representations of bull sport on Syrian seals than we had previously. One example was impressed on a tablet envelope fragment found in room 11 of the palace of Alalakh VII and is datable to the late 18th–17th century B.C. [57] The partially rolled image on the left side of the envelope is from one of two impressed seals *(Fig. 13)*. [58] A personal name (-]bi-ti-m[i-(d) H[épat]), is written across the impression (a practice seen also later in Mycenaean times). Unlike its companion seal rolled on the right side, which has standard Old Babylonian imagery, this seal design is unusual both in theme and composition. It consists of three groups of figures. One group is familiar on Mesopotamian-derived seals: a standing bearded robed figure on one side of a sacred tree below a winged disc. The other two provide a stark contrast to this scene, however, showing a bull facing right, surmounted by two acrobats flanking an ankh, with their hands on the bull's back and their legs in the air; and a large ibex in partial gallop to the left with a lion and griffin above. While the tauromachy and the gallop have been related to the art of Crete,

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55 For a discussion of the Near Eastern origin of the Minoan griffin (and some of these features), in the protopalatial period, see J. Aruz in: Mellink – Porada – Özgüç (supra n. 4) 38f.

56 Earlier known examples date to LM IB.

57 Collon (supra n. 30) 60 No. 111; D. Collon, UgaritF 13, 1982, 36 No. 6; 41 Fig. 1 No. 6; for the most recent review of Alalakh chronology and the destruction date for level VII, see T. McClellan in: A. Leonard Jr. – B. Williams (eds.), Essays in Ancient Civilization Presented to Helene J. Kantor (1989) 182f.; Collon (supra n. 4) 3, seems to entertain a destruction date in the late 17th century, yet prior to the Hittite destruction of Babylon in ca. 1595 B.C.; this could then overlap with MM IIIB–LM IA: see W.-D. Niemeier, Aegaeum 7, 1990, 191f.; regarding the correlation with the Hyksos period, which extends from ca. 1640–1550 B.C., there may also be some overlap, although 'Hyksos' scarabs are said to come from Alalakh VI: A. Kempinski, Syrien und Palästina (Kanaan) in der letzten Phase der Mittelbronze IIB-Zeit (1650–1570 B.C.), Ägypten und Altes Testament 4, 1983, 88f.; M.-H. Gates in: P. Aström (ed.), High, Middle or Low? II (1987) 80f., disagrees with Kempinski on this evidence.

58 Collon (supra n. 30) 160 No. 122 rolled from a seal depicting the Old Babylonian theme of a 'god' with a mace and a suppliant goddess.

this ornamental and rather static rendering of bull acrobatics owes little to Minoan style and composition.

Fig. 13 Alalakh sealed tablet (drawing).

Fig. 14a.b Syrian cylinder seal. (ex Erlenmeyer Collection, Metropolitan Museum, Anonymous Loan, 1992: No. L. 1992.43).

A closely related seal, formerly in the Erlenmeyer collection and now on loan to the Metropolitan Museum *(Fig. 14)*, has a similar underlying Syrian structure. [59] In this case, the acrobats are symmetrically arranged over a bull charging to the left in an unconvincing static posture, its horns held by another human. Above this scene is another bull before a seated lion with its head reversed. Adjacent to the tauromachy scene is a smiting weather god approached by a worshiper wearing a fleecy garment with thickly rolled borders. This

[59] D. Collon, UgaritF 13, 1982, 36 No. 7; 41 Fig. 1 No. 7; H. 2.15 cm; D. 1.05 cm; Collon attributes the seal to a 'Cappadocian craftsman' and the Alalakh example to a 'Mari craftsman', both working in Aleppo, and both their styles derivative from Sippar (UgaritF 13, 1982, 35).

juxtaposition of Classic Syrian II style imagery and the scene of animal combat and bull leaping that extends all over the field with no framing devices characterizes this and other related seals. There is no attempt to fuse these elements and we have two distinct scenes derived from two different traditions.

Fig. 15 Syrian sealed tablet dating to Samsu-iluna (drawing).

Fig. 16a Syrian cylinder seal (Metropolitan Museum, Gift of M. and S. Cherkasky, No. 1989.361.2).

Fig. 16b Syrian cylinder seal (ex Moore Collection).

Porada has stated that the posture of the bulls, the unconventional relationship of figures — with the upper bull's horn in the lion's mouth, the goat pawing at the god, and the worshiper holding the ankh, may indicate a non-Syrian origin for the seal. [60] She suggested a possible Cypriot origin, based on a comparison with a seal found in a tomb containing a LM I cup at Ayia Irini, on the northwest coast of the island. [61] However, unlike the Ayia Irini seal, with

[60] E. Porada in: Acts of the International Archaeological Symposium 'The Mycenaeans in the Eastern Mediterranean' (1973) 270f.; one could also add the holding of the bull's horns to this list.

[61] P. Pecorella, SMEA 15, 1972, 51 Fig. 13; V. Karageorghis (ed.), Archaeology in Cyprus 1960–1985 (1985) Pl. XIV,4: depicted are two figures and central ankh adjacent to a scene with a charging bull. A bird

its misunderstood headgear, garments and postures, the carving on both the Metropolitan Museum seal as well as the Alalakh seal, which we have already discussed, is consistent with carving on a large number of seals considered to be Syrian and may demonstrate the versatility of the craftsman and the diversity of his repertoire to suit patrons and function. [62]

One further closely related design, as pointed out by Porada and later Collon, occurs on a cylinder seal impression on a tablet envelope dated to the seventh year of the last Old Babylonian ruler, Samsu-ditana (ca. 1625–1595 B.C.) *(Fig. 15)*. [63] The envelope, from Sippar in Mesopotamia, contained a document recording a loan of silver. Two witnesses to this transaction use traditional Old Babylonian style seals while a third witness is the secondary user of the Syrian-style seal, his name added in an awkward spot between the legs of two nude bearded wrestlers. [64] On this Syrian seal, this Mesopotamian-derived scene is juxtaposed with a dynamic, more Mediterranean-looking scene [65] with smaller figures including two males with long hair and loin cloths attacking a rampant goat (its horns shown in 3/4 view), above a charging or fallen goat attacked by a lion. At right is a striding human figure.

On previously discussed seals, Mediterranean and Classic Syrian stylistic features are juxtaposed in the same work. On two seals with similar imagery in the Metropolitan Museum, we see these styles separated, making even clearer the contrast between the more restrained Classic Syrian II style *(Fig. 16a)* and a freer, more Mediterranean style *(Fig. 16b)*. [66]

'Eclectic' Syrian seals : Style and society

At present, we can only note the different ways in which foreign elements are appropriated. The eventual aim of the study of 'eclectic' Syrian seals is to learn about the craftsmen producing them, the patrons using them and their function – information difficult to recover, however, from the existing evidence. As we have seen, the carver of the seal from Ugarit excerpts a very specific Cretan image and places it within a Syrian design. Scenes of bull-leapers and figures wearing long hair with topknots, and loincloths with tassels

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replaces the acrobats and a guilloche is placed above. Despite its posture, the bull lacks a dynamic quality. Its head is not lowered, nor is there tension in its body. The figure is rooted to a ground line in a way that is distinctively un-Aegean; it may be a local Cypriot seal – produced in the 17th century B.C.

62 Syrian parallels occur for the fleecy (?) garment, the figure standing before the bull, and the smiting weather god: see D. Collon, UgaritF 13, 1982, Fig. 1,2.5.10.

63 E. Porada, JNES 16, 1957, 42f.; Porada (supra n. 60) 268f. Fig. 4; B. Buchanan, JCunSt 11, 1957, 47f.; Collon (supra n. 62) 36 No. 10 Fig. 1,10.

64 Buchanan (supra n. 63) 48: naming I?-lí-i-dí-nam.

65 Porada (supra n. 60) 269, attributes postures, hair and garments, as well as the lion's profile and the goat's horns to Aegean inspiration; similar headgear, hair, dress and lion type occur on the Alalakh and Erlenmeyer seals.

66 For a LB example of such a scene from Tyre, see H. Frankfort, The Art and Architecture of the Ancient Orient (1954 reprinted 1970) 260 Fig. 301.

in exuberant postures, seem to illustrate the impact of Minoan art, yet they are also clearly Syrian in style. These scenes are juxtaposed with more traditional, static Near Eastern figures. As already mentioned, there is nothing in the inscriptions of the seals or sealed tablets to indicate any of the seal users were foreigners.

Fig. 17 Cylinder seal reportedly from Membij, Syria.

Collon believes that these seals, part of her 'Aleppo group', were probably made in Syria for Syrian clientele, indicating the "international character of Syrian relations and contacts" in the late 18th and 17th centuries B.C. [67] In fact, the employment of Minoan fresco painters in the Levant and Egyptian Delta suggests that the visual information needed to transform aspects of Syrian art may have been readily available in Syria itself sometime in the 17th century.

Unlike seals produced in peripheral Mesopotamia by local carvers under circumstances of intense economic and cultural interaction and domination, such as the Colony period local Anatolian style seals and Persian Gulf seals, there is no attempt at synthesis on the 'eclectic' Syrian seals of the late Middle Bronze Age.

Finally, I would like to mention one additional cylinder seal *(Fig. 17)* that may indicate another phenomenon: the work of a Minoan carver in Syria. Purchased in Membij, Syria and now in the Ashmolean Museum, this seal is carved with animal attack scenes. While some of its filler motifs are Syrian, the modelling and the dynamism of the figures, the extension of bodies that are not rooted to the ground, and the variety of postures and intricate limb positions, accord well with Minoan images of animals in combat.

The Ashmolean seal has been dated to Buchanan's Late Old Syrian period (ca. 18th–16th century B.C.); [68] its Aegean aspects date to MM III–LM I. In its mixture of styles as well as motifs from east and west, the Membij seal is an early example of the type of fusion we find

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67 Collon (supra n. 30) 141.

68 B. Buchanan, Catalogue of Ancient Near Eastern Seals in the Ashmolean Museum I. Cylinder Seals (1966) 167. 175 No. 897: H. 2.4 cm; D. 1.2 cm.

later on the 'Cypro-Aegean' cylinder seals of the 14th century B.C. — indicating not simply awareness of foreign art but the work of foreign artists abroad.

To conclude, the study of glyptic offers us many avenues for the exploration of the relationship between the Levant and Crete. I have elsewhere examined the foreign-derived motifs in Minoan art. A study of extant Syrian imports to Crete provides evidence for the value placed on such foreign objects that were at times embellished and buried with their new owners but which had no profound influence on Minoan seal styles and compositions and may never themselves have been used as seals in the Aegean. In Syria we have no present evidence for the collecting of Minoan seals. However, Minoan art seems to have been greatly admired in this region, and to have exercised an important influence on certain schools of Syrian seal carving that perhaps will become clearer with future studies.

LIONS DEPICTED ON AEGEAN SEALS – HOW REALISTIC ARE THEY?

MARIJKE BALLINTIJN

Attention has often been drawn to the lively representation of lions on Minoan and Mycenaean seals and sealings. Within the stylistic conventions of Aegean art it is apparent from certain details in the anatomy and behaviour of these animals that some of the artists were well acquainted with the outward appearance of a lion and the way in which it catches its prey.

The source material for my research is to be found partly within the field of zoology. Literature about anatomy, normal habitat and behaviour of lions, augmented by observing them in zoological gardens, looking at photographs and watching films showing them in their natural surroundings, are indispensible to assess realistic as well as unrealistic elements in the Aegean depictions.

Animals which artists could see around them all the time, such as dogs and cattle, are sometimes recognizable in certain anatomical details or particular postures of the lions represented.

From the Early Minoan period onwards depictions of lions from other cultures in the Eastern Mediterranean have played a not unimportant role as models in Aegean art. Nevertheless the artists have always adapted these examples to suit their own principles of style and composition.

Since the beginning of the Late Bronze Age scenes of attacking lions appear, showing a realism which has no parallel in the Near East or Egypt, with which the Aegean area maintained contacts. In my opinion, comparison with photographs and films shows that these depictions must have been based on real-life observations.

Nothing indicates, so far as I can ascertain, that Minoan seal-engravers had really been able to observe lions before the beginning of the Late Bronze Age. From the Early Minoan period onwards, lions were a favourite subject in glyptic art, and their depiction shows considerable development as regards anatomical details and postures. Nevertheless examples from the Near East must have formed the craftsmen's main source of inspiration. In addition other animals, especially dogs, have served as models when representing lions. [1]

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* I am very grateful to Prof. J.H. Crouwel of the University of Amsterdam for critically reading the manuscript and to Mrs Angela Bollen-Buckwell for translating my Dutch text into English.

Illustrations are not to scale. Where no datings have been mentioned for seals and sealings listed in the footnotes, these have not been specified within LM or LH, as far as I know.

Anatomical Characteristics

Both in Crete and mainland Greece, images of lions appeared in LM I/LH I showing remarkably detailed depictions of anatomical characteristics typical of lions.

The lion *(Panthera leo)* distinguishes itself clearly from other quadrupeds by a number of specific characteristics. It has a bony, segmented face, with marked accents on the jaw and — in the case of a male animal — on the ruff. The ears are round, the eyes almond-shaped, with a clearly marked tear-duct. The body is slim and muscular. The heavy paws have large claws.

Broadly speaking a distinction can be made between African and Asiatic type lions. The African breed is characterized by a relatively long, slender body and a thick, straight-haired mane, while the Asiatic type has a stubbier body and a curly mane. There are also Asiatic species without a mane. The average length of an adult lion is 2 m. and 60 to 70 cm.; lionesses are slightly smaller. [2]

Not only can the build and mane vary considerably but numerous crossbreeds have developed, so it is difficult to define which variety is being portrayed when studying representations from the Mediterranean. In glyptic art, particularly, this presupposes an accuracy that can hardly be expected. [3]

Depictions of lions, whose anatomical proportions and details indicate that they are true to nature, start to appear on the mainland of Greece from LH IA onwards without there having been any forerunners in the Middle Helladic period. The above mentioned details can be detected in most of the portrayals of lions found on objects from the Mycenaean Shaft Graves. Pronounced stylization does not detract from a careful observation of nature: on the gold rhyton from Shaft Grave IV even details such as tear-ducts and whiskers are reproduced. [4]

Source of illustrations: *Fig. 3:* R. Opificius, Das altbabylonische Terrakottarelief (1961) 269 Fig. 624; *Fig. 4:* I. Pini, BCH Suppl. XI, 1985, 155 Fig. 5; *Fig. 5:* Leyhausen, Vstudien Fig. 47; *Fig. 6:* Özgüç, SSI Pl. XXXII,2; *Fig. 8:* I. Pini, AA 1982, 605 Fig. 1; *Fig. 9:* W. Wreszinski, Morgenland 23, 1932, Pl. 2,4. Remaining photographs from the Archives of CMS.

1 See for the EM period the lions of the 'Parading Lions Group', Yule, ECS 209; many examples of this group are to be found in CMS II,1 and II,2. They can be compared with impressions of Mesopotamian stamp seals, e.g. Buchanan, YBC Pls. II No. 37; III No. 38. Lions on MM seals and sealings, e.g. CMS II,3 No. 277; II,5 Nos. 272. 274. 275. 282; VIII Nos. 103. 104; XI No. 82 show similarities with impressions of stamp seals and cylinder seals from Karahöyük and Kültepe found in contexts of the first quarter of the 2nd mill. B.C.; see S. Alp, ZSK Nos. 106. 109. 125 and N. Özgüc, The Anatolian Group of Cylinder Seal Impressions from Kültepe (1965) Nos. 11. 47. 58. For lions based on dogs see the Phaestos sealings CMS II,5 Nos. 279. 284 and seals in the shape of a lion lying down in a curved position which is characteristic of dogs, Sakellariou, CollGiam No. 181 and H.B. Walters, Catalogue of the Engraved Gems and Cameos, Greek, Roman and Etruscan in the British Museum (1926) No. 106.

2 Bertram, PoL 15f.; W. and U. Dolder, Löwen (1988) 6f.

3 I do not agree with the reconstruction of a 'Greek lion', based on Aegean depictions, by H. Hemmer, Säugetierkundliche Mitteilungen 14, 1966, 300ff.

4 Karo, Schachtgräber No. 273, Pls. 117. 118.

Several archeologists have pointed out the similarities concerning anatomical details and general style between the lions on objects from the Shaft Graves and a number of seals of the same period or of a slightly later date. [5]

On two gold flattened cylinders from Shaft Grave III, one with a lion killer and another with a wounded lion *(Fig. 1)*, a slanting vein – the inner *saphena* – is correctly shown on the inner side of the hind leg. However, the great *saphena* is wrongly shown on the outer side of the foreleg muscles: in reality it runs across the outer side of the hind leg. [6] These veins are clearly visible on most lions observed in real life. They appear also in portrayals of lions on other objects from the Shaft Graves. [7] They are retained in glyptic art on the mainland into LH IIIA. [8] J.-Cl. Poursat traces the origin of the representation of these veins to depictions of lions on objects in precious metals and not to glyptic art. Works of art from the Near East could have set the example. [9] In my opinion the fact that in some of the representations in Aegean art the vein is depicted in the right place can also indicate observations from nature.

Fig. 1 Wounded Lion. CMS I Nr. 10

Fig. 2 Lioness suckling cub. CMS I Nr. 106.

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[5] Boardman, GGFR 395; J.-Cl. Poursat, Les ivoires myceniens (1977) 204ff. See e.g. CMS I Nos. 247. 249. 250 from Vapheio (context LH IIA); I No. 62 and XIII No. 20 from Mycenae (style LH I–II); I Nos. 272. 280 from Routsi (context LH IIA); I No. 185 from Dendra (context LH III); XI No. 169, findplace unknown (style LM/LH II); X No. 131.

[6] See the anatomical drawing in E.E. Thompson, Studies in the Art Anatomy of Animals (1896) Pl. 25; cf. also J.G. Younger, AJA 82, 1978, 88.

[7] Examples from the Shaft Graves are the lions on the Lion Hunt dagger from Grave IV (Karo, Schachtgräber No. 394 Pls. 93. 94), the lion and leopard on the gold pommel (Karo, Schachtgräber No. 295a Pls. 75. 78) and the lions on the ivory pommel (Karo, Schachtgräber No. 295b Pls. 75. 76. 78).

[8] Examples in glyptic art are mentioned by J.-Cl. Poursat (supra n. 5) 202ff. and J.G. Younger (supra n. 6) 88.

[9] J.-Cl. Poursat (supra n. 5) 236f. mentions as examples a stone sculpture from Tell Harmal (Baghdad Mus.) and a terracotta plaque from Mari (Paris, Mus. du Louvre, Inv.No. 1144), both dating from the beginning of the 2nd mill. B.C. (A. Parrot, Sumer [1960] Pls. 364. 354).

Lionesses

Although the great majority of lions are male, it is clear that the Aegean artists were sometimes trying to portray a lioness. This they did by providing the male animal with teats. [10] From LM I/LH I until LM IIIA/LH IIIA one comes across such a portrayal of the animal both in Crete and the mainland. Sometimes the lionesses are depicted standing up or walking. [11] It is remarkable how few of the lionesses are depicted with a cub *(Fig. 2)*. [12] Usually the male animal — thus without teats — stands in for her in her role as mother. [13] The motif of a lion or lioness standing, with its head lowered and facing backwards towards the cub who is stretching up to drink, is not realistic; in fact, a lioness always suckles her cubs lying down. Here illustrations of other animals, especially cows, have obviously been used as models. [14]

The lioness with mane and teats is also depicted while attacking a prey; sometimes there is a cub with her. [15] When cubs are about four months old, they accompany the lioness when she goes hunting, [16] but it is unlikely that the craftsman who engraved CMS II,3 No. 99 wanted to portray that, because the cub is lying down. The unnatural portrayal of the lioness with teats and mane and the suckling male animal do not to my mind prove that Aegean artists had never seen lions. [17] It is quite possible that they expressly depicted a lioness with a mane — with or without teats — so as to make it clear that it was a lioness and not just some other animal. There are examples of lions without manes, [18] but none of lions without manes but with teats.

The lioness with mane and teats is an Aegean invention and, as far as I know, no parallels are to be found in the Near East or Egypt. The same is true of the motif of a lion with a cub.

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10 The number of teats varies in the depictions. In reality a lioness has four of them (Dolder [supra n. 2] 19).

11 E.g. on a sealing from Haghia Triada (terminus post quem non LM IB), ASAtene 8/9, 1925/26, 6 No. 38 Pl. XIII; CMS II,3 No. 102 'from Hierapetra' and No. 122 from Porti (style LM I–II); V No. 304 from Chora (context LH I–II); CMS I Suppl. No. 168 from Thebes (style LH II–III); XI Nos. 115. 242. 317, findplaces unknown (style LM I–II) and X No. 303, findplace unknown.

12 CMS I Nos. 78. 106, both from the Chamber Tombs of the Lower Town of Mycenae.

13 CMS II,3 No. 198 'from Anopolis', No. 344 from Gortyna (style LM IIIA); II,4 No. 48 'from Evanjelismos' and a sealing from the Palace of Knossos (J.H. Betts, BSA 62, 1960, 43, No. 57); Kenna, CS No. 298, findplace unknown (style LM IIIA) and CMS XII No. 286, findplace unknown (LM/LH II?).

14 See e.g. CMS I No. 20 from Mycenae and CMS II,3 No. 88 from Knossos, both showing cows.

15 CMS II,3 No. 99 from Kalyvia (context LH IIIA1), No. 273 from Knossos (LM III?); VIII No. 159, findplace unknown (style LM/LH IIIA).

16 Bertram, PoL 87.

17 Boardman, GGFR 395 regarded this as evidence, but when he wrote this lion bones had not yet been found on the Greek mainland.

18 See e.g. CMS I No. 246 from Vapheio (context LH IIA) with a very thick neck, but without any indication of a mane. In most examples these lions are anatomically incorrect, even if they are recognizable as lions: CMS IV No. 259 from Tsoutsouros (style LM II?); I Nos. 51. 70 from Mycenae; V No. 660 from Salamis (context LH III); I No. 388 from Menidi (context LH IIIB); V No. 313 from Delos (style LH IIIA?), and the following from unknown findplaces: CMS XI Nos. 43. 273 (style LM/LH II–IIIA1) and XIII No. 57.

Male Figures with Lions

This motif, of which two sealings from the Temple Repositories of the Palace at Knossos – dating from MM IIIB – are the oldest examples, remained in use during the Late Bronze Age. The representation on a seal impression from Haghia Triada showing an archer wearing a conical-shaped head-covering and accompanied by a small lion, is closely related to the sealings from Knossos. [19] In other depictions, the lions are very large in comparison with the men who are keeping them under control. This is true not only of the other examples from Crete but also of those from the Greek mainland. [20] It is not impossible that the lions are portrayed so excessively large so as to emphasize even more the power the god or hero had over strong animals. Quite possibly this idea was taken over from the Near East [21] *(Fig. 3)*. In my view, such images are no proof that lions were tamed or held in captivity, as has been suggested. [22]

Fig. 3 Male figure with a leashed Molossian hound. Terracotta relief. From Ur, 16th century B.C.

Fig. 4 Two lions attacking a bovine. Sealing from Tylissos.

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19 Evans, PM I 505. 680 Fig. 363a–c. Evans points out the Hittite origin of the attire of the male persons; cf. also R. Boehmer, Die Reliefplastik von Bogazköy (1983) Fig. 10, dated to the 16th century B.C.

20 CMS II,3 Nos. 24. 27, both from Knossos (contexts LM IA and LM III); XII No. 207 from Crete? (style LM I); I No. 512 from Crete; examples from the Greek mainland are CMS I No. 280 from Routsi (context LH IIA); I No. 133 from Mycenae; examples of unknown provenance are CMS VII No. 169 (style LM/LH IIIA); II,3 No. 329; IX No. 114; Sakellariou, CollGiam No. 338.

21 Cf. also the same motif with a dog: CMS II,3 No. 52 and with a bovine: CMS VII No. 102. This motif occurs also on Old-Babylonian terracotta reliefs, usually with Molossian hounds as in Crete, but there is also an example with a lion, found at Ur and dating from the 16th century B.C. (R. Opificius, Das altbabylonische Terrakottarelief [1961] 171. 237).

22 See the description of CMS VII No. 169.

Lions on the Hunt

Various archeologists have paid attention to depictions of lions who are attacking their prey and pointed out the often striking resemblance to reality. [23] Here I will not go into all the non-realistic variations that were developed by Aegean artists from the beginning to the end of the Late Bronze Age, but only point out a number of examples that make observation from nature plausible.

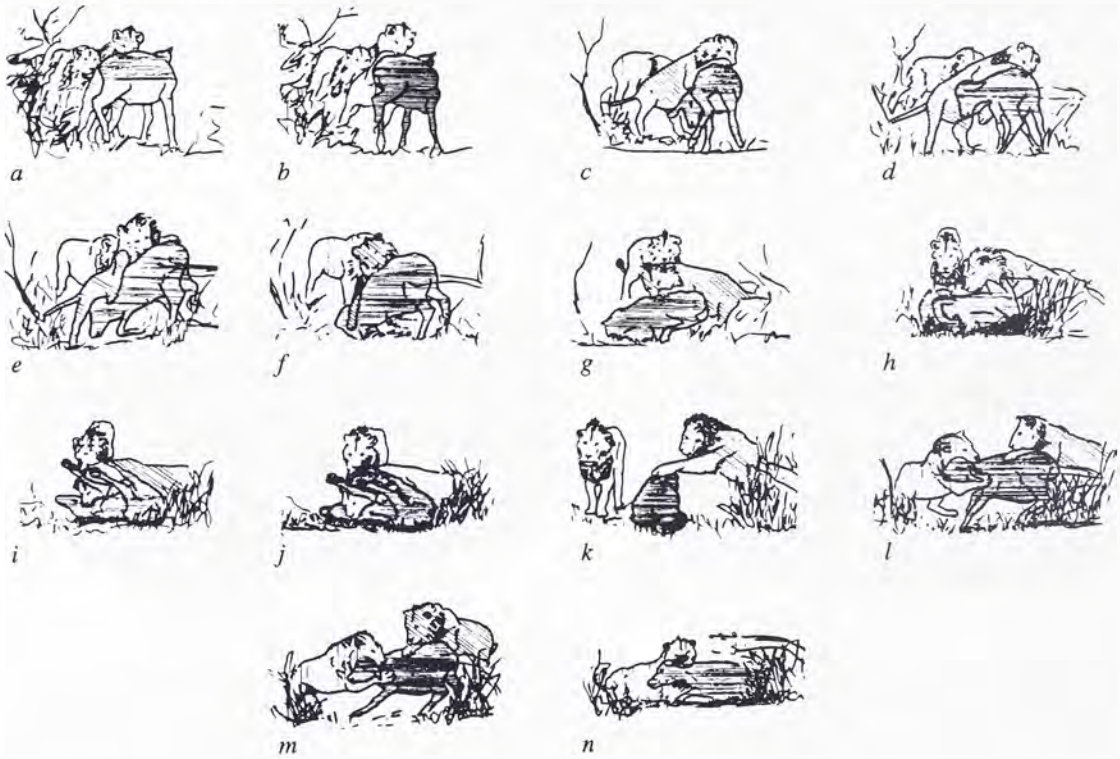

Abb. 5 Two lions attacking a prey. Drawing after a series of photographs.

Living in prides, lions often hunt together, which also increases their chances of success. [24] As a rule, two or more lions encircle their victim and then they attack from different angles. One of the lions usually pounces sideways on to the prey. The attacker digs its claws and teeth into the hindquarters, the shoulders or the nose of the prey and by pulling it sideways or backwards tries to fell the beast, sometimes assisted by its fellow attackers.

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[23] Evans, PM IV 528ff.; Hemmer (supra n. 3) 299f.; E. Vermeule, The Art of the Shaft Graves (1975) 39; I. Pini in: L'Iconographie Minoenne 153ff.; Morgan, MWPT 44f.

[24] Bertram, PoL 129f.

The prey is usually killed by a bite in the neck or throat *(Fig. 5)*. [25] Despite its primitive workmanship, the stela from Shaft Grave Alpha in Grave Circle B at Mycenae gives a correct picture of two lions attacking a bull. [26] Examples in glyptic art which are closely related to reality are known from both Crete and the Greek mainland *(Fig. 4)*. [27] In Aegean art lions out hunting are nearly always males, which does not correspond with reality. Although male lions sometimes assist with the encircling and rousing of the prey, it is usually the lionesses who actually attack. [28] Probably there have been artists who knew this, but they deliberately depicted the lions as male, whether in an group or single, in order to differentiate them from hunting dogs. [29]

The first phase of the attack, the short sprint after the lion has stalked to within a short distance of its prey, is not depicted in glyptic art, probably because a seal's small size makes it almost impossible to show running animals one behind the other. In other media however, one can see the chase. Examples include a lion who is chasing a deer-like animal on a stela which stood above Shaft Grave V at Mycenae, and a lion chasing three deer on the mural of the South wall of Room 5 in the West House at Akrotiri. [30] On the gold foil plaques of a hexagonal wooden box from Shaft Grave V there is a lion rushing along in flying gallop, just on the point of grabbing its victim. [31] In both the first-mentioned examples it is noticeable that none of the animals being chased is looking back at its persuer. Often animals in flight are depicted regardant. In reality not a single animal fleeing from danger as fast as it can will look back as that would result in loss of speed. Undoubtedly the artist who made use of this convention would have known that fact. However, an animal with its head turned backwards as it runs away expresses panic far more effectively than one looking where it is going. In addition a composition depicting two or more fleeing animals is more lively if one of them is shown regardant. [32]

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25 Leyhausen, Vstudien 22ff. Figs. 21 and 47 (= our Fig. 5); Bertram, PoL 129f.

26 Sp. Marinatos, AAA 1, 1968, 175. 177 Fig. 1. See for a reconstruction drawing N. Marinatos in: Hägg – Nordquist, Celebrations 144, Fig. 2. Cf. our Fig. 5m. The stela is so far the earliest known depiction of this motif in Aegean art.

27 See e.g. a sealing from Tylissos (our Fig. 4) and another from Pyrgos (terminus post quem non LM IB), a sealing from Knossos (context LM IIIA2): Pini (supra n. 23) Figs. 5,1.4 and a seal from Dendra (context LM IIIA1): CMS I No. 186; cf. our Fig. 5l–m.

28 Bertram, PoL 117; Dolder (supra n. 2) 27; Morgan, MWPT 44. It can also be observed regularly in nature films showing a group of preying lions.

29 For examples with dogs see Pini (supra n. 23) 161 with n. 39 and Younger, Iconography Pose Types 41. 42A. 43. 47A. 49B. 50B. 52B for schemes of lions and dogs in the same positions attacking a prey. The most striking examples of two similar compositions, one with lions and the other with dogs, are the gold cut-out plaques from Shaft Grave III (Karo, Schachtgräber Nos. 119. 120 Pl. 33) and the wall painting with the boar hunt from Tiryns, probably of LH IIIB (G. Rodenwaldt, Tiryns II [1912] 130 Fig. 55). It shows how such representations are based on conventions, even if they contain elements which were originally founded on observation of nature.

30 Karo, Schachtgräber No. 1427 Pl. 6 and Morgan, MWPT Pl. 8.

31 Karo, Schachtgräber Nos. 808–811 Pls. 143. 144.

32 The convention of representing fleeing animals regardant was current in the Aegean, the Near East and Egypt. In the Aegean it appears for the first time on two MM II sealings with quadrupeds in flying gallop from Phaestos: CMS II,5 Nos. 276. 277. For an example from the Near East, see an Akkadian cylinder seal (style 2350–2200 B.C.) (Frankfort, Cylinder Seals, text Fig. 36). In Egypt the convention can be seen on wall paintings

There are two different schemes for a single lion who attacks its prey. In one design the lion's hind legs remain on the ground, in the other the lion pounces on the back of his victim.

Examples of the first scheme that show a close affinity to reality are to be seen in glyptic art from the mainland and in that from Crete as from LM I/LH I. [33] In these depictions the lion digs its claws into the back or neck of its prey and tries to pull it down on to the ground, or kill it by biting into the neck. [34] Not only the lion's behaviour but also that of the prey, with its bulging eyes and open mouth, are unexpectedly life-like.

A lion who is hunting on his own, will prefer not to attack head-on because of the risk it runs of being wounded or killed by the horns of its prey. Frontal attacks are more frequent if lions hunt in a group and the prey is being threatened from different angles. [35] Perhaps the Aegean portrayals showing a frontal attack by one lion [36] originate from examples showing more than one attacker.

The scheme in which the lion is leaping on to back of its victim, and from which the oldest known example stems from the deposit of sealings from Phaestos, [37] was far more popular in Aegean art than the scheme by which the hind legs stay on the ground. This method of attack is not described in the zoological literature I have read, although the authors are experts who have studied the behaviour of lions and other feline animals for many years either in zoological gardens (Leyhausen) or in the wild (Bertram and Dolder). [38] I. Pini compares a drawing from a photograph showing a lion jumping on the back of its victim which is just on the point of collapsing, with a number of representations in Aegean glyptic art used by him as examples of the scheme. [39] A spectacular attack such as the one on a sealing from Knossos, probably from LM I, where a lion is shown in the act of leaping on top of an animal running at full speed is not impossible: once I saw an excellent example of

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of the Middle and New Kingdoms with hunting scenes. Good examples from the Aegean are the lions on the dagger from Shaft Grave IV (Karo, Schachtgräber No. 394 Pls. 93. 94) and the fallow-deer on the other side.

33 See also Pini (supra n. 23) 157ff.

34 For examples see a lentoid seal from Knossos (terminus post quem non LM IB): M.S.F. Hood, ARepLondon 1961/62, 27 Fig. 38; a lentoid seal from Vapheio (context LH IIA), a lentoid seal from Argos (context LH IIIA), and a three-sided prism from Midea (context LH IIIB): CMS I Nos. 294. 252. 290. For ills. of such attacks in nature, see Leyhausen, Vstudien Figs. 19. 21e–i; Bertram, PoL Pls. 56. 90–92; I. Pini in: L'Iconographie Minoenne Fig. 11.

35 Dolder (supra n. 2) 27; Leyhausen, Vstudien Fig. 11f–h gives an example of a lion playfully attacking another lion in this manner.

36 CMS I No. 253 from Vapheio (context LH IIA), No. 388 from Menidi (context LH IIIB); XI No. 169, of unknown origin (style LM/LH I–II).

37 CMS II,5 No. 286. A. Evans already noticed that this scheme had been developed out of the theme of hunting dogs leaping on the neck or back of wild goats (PM IV 527f. Figs. 470. 471). Cf. for the same scheme with a dog, the sealing from Phaestos (CMS II,5 No. 284). In the Near East the scheme is rare, but not totally absent. Cf. e.g. Özgüç, SSI Pl. XXXII Nos. 1–3.

38 Bertram, PoL 129: "If a hunt is successful, a lioness catches up with, and brings down a prey animal; she does this, not by leaping on to the animal's back as is often supposed, but actually by seizing the rump and shoulders with her claws; the prey is almost fleeing fast at this stage, so is thrown off balance and falls to the ground."

39 I. Pini in: L'Iconographie Minoenne Figs. 12. 16 = CMS V No. 602 from Mycenae. This representation is still not realistic because the lion's body is not leaning on that of his victim: in this manner he would never have been capable of keeping his balance.

this in a nature film. [40] Actually this method of attack is highly exceptional, and therefore it is far more likely that the source of inspiration was canine behaviour. Similar schemes on sealings from Kültepe *(Fig. 6)*, dated to the first quarter of the 2nd millenium B.C., could also have had an influence. Related to this motif is the scheme in which the lion bites its prey which is already lying on the ground. [41]

Fig. 6 Griffin attacking a bull. Impression of a stamp seal. From Karum Kanish (Kültepe), Level Ib. First quarter of the 2nd millennium B.C.

The number of depictions showing animal fights that are obviously based on observations from nature is comparatively small. What they actually prove is that there were artists in the Late Bronze Age who were well informed as to how a lion persued its prey, pounced on it and killed it and how the prey — for the most part cattle, deer and goats — reacted to its predator's behaviour.

Since 1979 lion's bones dating from the Late Bronze Age have been found at different places on the mainland of Greece, even in places that are not regarded as important centres. [42] From this it can be concluded that lions almost certainly lived in the wild in Greece and were not, or not exclusively, imported from other areas in the Eastern Mediterranean. The bones were found in areas of human habitation, so artists there could have seen the lions — dead or alive — something which gave them the opportunity to observe their anatomical details very closely. Predators killing their prey create a problem for us,

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40 BBC Video No. 4179 (1988): 'Okavango, Jewel of the Kalahari.' After a short sprint a lioness leapt on all fours onto the back of a gnu and succeeded in clinging on for seconds before the running prey managed to throw her off. Cf. I. Pini in: L'Iconographie Minoenne Fig. 13.

41 E.g. on an amygdaloid seal from Eleusis(?), CMS XI No. 44; cf. Leyhausen, Vstudien Fig. 57. See also CMS I No. 303 from Mycenae and V No. 435 from Nichoria.

42 I. Pini in: L'Iconographie Minoenne 156 n. 12. and R. Felsch in: Hägg – Nordquist, Celebrations 147. In Crete so far no lion bones have been found.

because — according to present-day observers — this is not easy to observe without all sorts of modern equipment. In addition, the attack is often over so quickly that afterwards it is difficult to re-construct exactly what happened. Moreover in the wild one's view of what is going on is often restricted by high grass and sand blowing about. In my opinion it is quite possible that attacking lions were observed inside a fenced-in area: a zoological garden or a hunting park. So far no evidence for this has been found on the Greek mainland. Wall paintings from Crete and Thera indicate the existence of large well laid-out gardens, where animals may have been kept in captivity. [43] Such gardens also existed in the Near East and in Egypt. For instance, in the 18th century B.C. the Hittite king, Anitta, had an enclosure made for wild animals near a temple at Kültepe (Kanish) where, besides two lions, leopards, bears, deer, boars, and goats were kept. [44]

In Egyptian tomb paintings from the Old Kingdom, the Middle Kingdom and especially the first half of the New Kingdom, the desert animals people used to hunt can sometimes be seen inside an enclosure surrounded by nets. [45] J. Leclant has found remains of such an enclosure near Amenhotep III's Jubilee Temple at Soleb in Upper Nubia. [46]

Sometimes lions were also caught alive, perhaps for animal parks where they could be bred or tamed. In a relief on the wall of Ptah-hotep's tomb at Saqqara dating from the Fifth Dynasty, one can see how a captured lion and leopard are being transported in cages on a sledge. [47] Remains indicating a menagerie and dating to the period between Seti I and Ramesses III, ca. 1300—1150 B.C., [48] were found near the palace at Qantir. The remains consist of the bones of a lion, an elephant, different kinds of antelope and a gazelle.

Lion killers, Hunting scenes and Wounded Lions

A lion standing upright on its hind legs and fighting a male figure is a conventional motif, a formula for the concept 'lion killer' or 'enemy suppressor'. The earliest known examples are a flattened cylinder from Shaft Grave III at Mycenae *(Fig. 7)* and a lentoid seal from Chania dating from LM I. The composition is closely related to that of a duel between two human opponents. [49] The design for the fight is not taken from real life, but from examples

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43 Examples are the wall painting of the 'Crocus Gatherer' from Knossos, Evans, PM I 265 Pl. IV (the monkey was reconstructed as a human being); the mural with the blue monkeys from Thera, Chr. Doumas, Thera (1983) colour Pl. IX; and that of goats and hunting cats from Haghia Triada, Evans, PM I Fig. 391.

44 RAVA VI (1983) 604; VII (1987) Heft 1/2, 86.

45 Examples can be seen in the Grave Temple of Sahure, Abusir, from the beginning of the 5th Dynasty; in the tomb of Senbi at Meir, from the 12th Dynasty (Vandier, Manuel IV [1964] Fig. 454) and Tomb No. 100 (of Rekhmire) at Thebes (Vandier, Manuel IV, Fig. 459).

46 J. Leclant in: Mélanges en hommage à Raymond Mauny (1981) 727ff.

47 See N. de Garis Davies, The Mastaba of Ptahhetep ... at Saqqara I (1900) Pl. 21.

48 J. Boessneck – A. von den Driesch, Studien an subfossilen Tierknochen aus Ägypten (1982) 136ff.

49 Good examples of both types have been found in Shaft Grave III: cf. CMS I No. 9 (= our Fig. 7) and No. 111, showing warriors. Professor I. Pini kindly drew my attention to the LM I lentoid seal from Chania, CMS V Suppl. 1A No. 135.

from the Near East where the scheme had a long tradition: the upright stance and the turn of the lion's head so that it can be viewed from above, as shown on the Mycenaean seal, had already appeared when biting lions were shown standing up vertically in Sumeria in the Early Dynastic period, especially ED III (ca. 2600–2400 B.C.), and it continued into the Neo-Assyrian period. [50] The consequent transformation of the formula into the lively images in Aegean glyptic art differs greatly from the stiff traditonal examples from the Near East. The motif was more popular on the mainland of Greece, but not unknown in Crete. [51] Examples which show two almost identical group fights, of which the 'Danicourt ring' is the best known, come exclusively from the mainland. [52]

Fig. 7 Lion killer. CMS I No. 9.

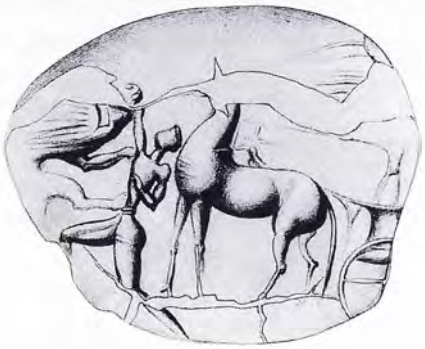

Fig. 8 Lion killer, chariot and horse. Sealing from Pylos, Palace.

In some of the portrayals it is difficult to decide if the concept 'lion killer' is intended or whether a real hunting scene is depicted. [53] Compositions that at first sight can be regarded

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[50] Cf. an Early Akkadian cylinder seal of unknown provenance (ca. 2300–2200 B.C.), Buchanan, YBC 153 No. 406, and two Old-Babylonian examples, Propyläen Kunstgeschichte 14 Pls. 268a (19th century B.C.) and 268d (18th century B.C.).

[51] Examples are CMS I No. 228 from Vapheio (context LH IIA), on which the hero protects himself with a figure-of-eight shield; No. 209 from Pylos (style LH I–II) showing a lioness with a mane; XI No. 208 from Kakovatos (style LH I–II); I No. 331 from Pylos with two men attacking a lion whose legs and body resemble those of a horse (terminus post quem non LH IIIB); IV No. 233 from Siteia (style LM I–II) and IX No. 152 from Siteia (?) with a hero wearing a conical helmet. A cylinder seal, found at Thebes and probably made in Cyprus, shows influences from the Near East in the attire of the hero and in the stiff postures (I. Pini, JdI 1980, No. C.2 Fig. 12; E. Porada, AfO 28, 1981, 21ff. No. 6; J.L. Crowley, The Aegean and the East [1989] 257f.).

[52] CMS XI No. 272 from Saloniki (style LH I–II) and the sealings CMS I Suppl. No. 173 and I No. 307 from Pylos (context LH IIIB, but they should probably be dated LH I–II; see I. Pini in: CMS Beih. 3, 210).

[53] The duel-scheme can also be seen with a goat instead of a lion as an adversary, cf. CMS VII No. 131. The way lentoid seals should be turned can also evoke doubt concerning the interpretation. N. Marinatos in: Hägg – Nordquist, Celebrations 146 considers the representation on CMS II,3 No. 14 from Knossos as belonging to a

as falling into the category 'hunting scene', such as hunters who tie up or carry away a dead lion, are known from Crete and the Greek mainland. They were also used for less realistic subjects, such as seen on a seal where the hunter is replaced by a Minoan genius. [54]

Hunting dogs, who are absent in the hunting scenes of the Shaft Graves, are to be seen on a sealing from the House of the Shields at Mycenae and on an seal from Syme, dated to LH II–IIIA1. [55]

A sealing from Pylos shows a depiction which is unique in Aegean art. In addition to a man fighting with a lion, a horse and a chariot are represented *(Fig. 8)*. [56] As was the case on military expeditions, [57] the chariot here apparently only provided transport to the spot where the fight with the lion was to take place, because the horse and chariot are stationary and the charioteer is still in the vehicle. The fight with the huge lion reflects the 'lion killer' scheme in all the above-mentioned examples, however misleading these can be because of their varied and lively postures when compared with those from the Near East. The 'hunter' probably fought with a short weapon, a thrusting spear or dagger, which he stabbed over-arm into the lion's head. [58] For me, the scene with the chariot raises the question of whether it should be interpreted as portraying an actual lion hunt. Another possibility is that it is symbolic for making war. The use of the chariot exclusively for transport combined with the fighting scheme of the lion and the man could point to that. Although it is rather dangerous to rely on only one example, symbols of hunting and warfare are inseparably bound together in the arts of the Eastern Mediterranean during the Bronze Age.

That chariots were also used for hunting is apparent from a depiction of a deer hunt on a gold ring from Shaft Grave IV and a Cypro-Aegean cylinder seal of unknown origin in the Louvre in Paris. [59] The composition scheme of a light two-wheeled chariot drawn by a pair of horses was borrowed from Western Asia by the Aegean as well as by Egypt. The earliest known use of these chariots for hunting is shown on Syrian cylinder seals from the 18th and 17th centuries B.C. [60]

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realistic hunt; this is plausible if one assumes that the stringhole runs diagonally. When it is assumed that the stringhole runs vertically, as Younger, Iconography 159, does, then the 45° turned motif belongs to the category 'lion killer'. Another case of a picture which is difficult to interpret is CMS I No. 112 from Mycenae.

54 For the tying up of a lion see a sealing from Zakro (terminus post quem non LM IB) (D. Levi, ASAtene 8/9, 1925/26, No. 193 Fig. 231); CMS XI No. 165 from Crete (?) (style LM I–II); I No. 224 from Vapheio (context LH IIA). Two dead lions hanging on a pole are being carried away by a male person on CMS XI No. 301, of unknown origin (style LM/LH II–IIIA1), and by a Minoan genius on CMS XI No. 37 from Crete (style LM/LH II–IIIA1).

55 CMS I No. 165; XI No. 33.

56 CMS I No. 302 (style LH IIIA or earlier) with an inaccurate description and drawing, corrected by I. Pini, AA 1982, 604ff.

57 J.H. Crouwel, Chariots and Other Means of Land Transport in Bronze Age Greece (1980) 137.

58 At the very spot where the weapon could have been visible the sealing is damaged. The man's posture is nearly identical with that of the man on the right on CMS I No. 331, also from Pylos, who with an over-arm jab of his dagger is stabbing the lion in the head.

59 CMS I No. 15 and Pini (supra n. 51) No. A.8 Fig. 6.

60 E.g. M.A. Littauer – J.H. Crouwel, Wheeled Vehicles and Ridden Animals in the Ancient Near East (1979) 63 Fig. 36.

In early times lion hunting in Egypt and the Near East will have been necessary to protect cattle. Whether it was also necessary on the Greek mainland I gravely doubt, considering the nature of the landscape. The stelas over Graves Alpha and Gamma from Grave Circle B at Mycenae show cattle under attack from lions being defended by their herdsmen. I. Pini has pointed out correctly that such complex illustrations must have had prototypes. He thinks it is possible that the examples were seals. [61] Some Mesopotamian seals show similar scenes *(Fig. 9)*, but the difference in dating between them and the stelas is considerable [62].

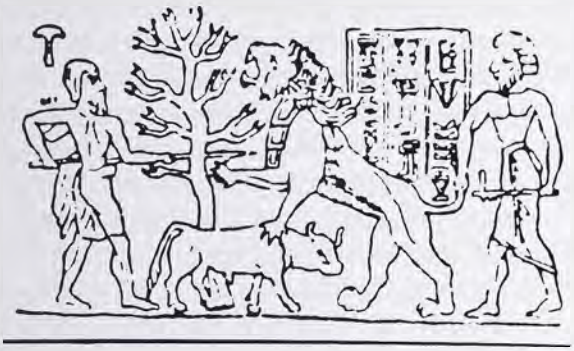

Fig. 9 Two men protecting a cow against an attacking lion. Mesopotamian cylinder seal, Akkadian period (ca. 2200 B.C.).

Fig. 10 Lion, man and goat. CMS V,1 No. 246.

In Aegean glyptic art the scene showing the defence of domestic animals is depicted on two lentoid seals, one each from Knossos and Armeni. [63] The interpretation of the Armeni seal *(Fig. 10)* is problematic. The composition is evidently based on two different models: a lion in torsion and a man with a goat. [64] The man is using both hands to hang on to the hind legs of the goat as it tries to break away, perhaps to protect the animal from the lion, although it looks rather as if he is trying to stop the goat from escaping. In my opinion it is not clear if the lion is attacking the man or the goat: it does not differ from the stereotyped lion in torsion. Perhaps the lion should be regarded as having been killed, [65] but there is no weapon either in the man's hand or in the lion's body. Probably the artist intended to depict a

61 I. Pini in: L'Iconographie Minoenne 157. 166.

62 Cf. a cylinder seal from the Uruk period (ca. 3200 B.C.), Buchanan (supra n. 50) No. 139 and another from the Akkadian period (ca. 2200 B.C.), W. Wreszinski, Morgenland 23, 1932, Pl. 2 Fig. 4 (= our Fig. 9).

63 CMS II,3 No. 9; V No. 246 (style LM II–IIIA1).

64 A. Tamvaki in: CMS Beih. 1, 210. 222; I. Pini in: L'Iconographie Minoenne 165.

65 Cf. e.g. the posture of the wounded lion on CMS V No. 680.

man defending a goat against lions. The way in which he executed the theme depended more on using signs or symbols than on a narrative composition.

In my view a formula for the hunt/war is the representation of a solitary lion, wounded by an arrow or spear that is embedded in its body. It must have been a popular motif, as it occurs frequently, although exclusively in glyptic art. The oldest known example is the lion on a flattened cylinder from Shaft Grave III at Mycenae *(see Fig. 1)*. The forelegs of the animal are about to give way, while it is biting at the arrow in its flank. Sir Arthur Evans had already noticed that the way a bovine collapses was sometimes copied in the case of a lion, and A. Donohue discovered that the forelegs of this lion and those of the lion on a lentoid seal in New York show anatomical characteristics that have been borrowed from cattle. [66] The excessively long curve of the lion's neck can be traced back to Cretan portrayals of wounded animals with their heads turned backwards. The scheme is not often used for lions. [67] A wounded lion is represented in several other different postures, not one of which bears any resemblance to realilty. Some wounded lions which are shown trying to scratch away the projectile with one of their hind legs, are certainly based on non-wounded dogs in the same position. [68] In addition there are many wounded lions shown couchant, sitting, or in torsion, just as they are depicted in glyptic art, without any visible weapons in their bodies.

The most convincing portrayal of a lion hunt is that on the dagger from Shaft Grave IV at Mycenae, where four men armed with shields and spears are fighting against three lions. [69] Nevertheless I regard it as most unlikely that the portrayal is based on reality. Several stereotype motifs are included which can also be found in other representations. The man with his legs drawn-up who is either collapsing or dead, we also see lying underneath a lion in an Early Minoan ivory seal from Kalathiana, and he is also depicted on the Vapheio Cup which shows bulls being caught in nets. [70] Archers in the same posture are shown on a steatite vase-fragment from Knossos, dated LM I–II, and on the Siege Rhyton from Shaft Grave IV. [71] The behaviour of the attacking lion seems true to life, and may be based on

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66 Evans, PM IV 549; A. Donohue, AA 1978, 259ff. For other animals who may or may not have been hit by a projectile see CMS II,2 No. 60; II,3 No. 135, both from Crete, and CMS I Nos. 121. 355 from the Greek mainland.

67 Examples are CMS XII No. 229, probably originating from the mainland (style LH I–II); CMS I Suppl. No. 81 from Crete.

68 CMS I No. 248 from Vapheio (context LH IIA), No. 277 from Routsi (context LH IIA); XI No. 48 – without projectile – from Gythion (style LM II–IIIA1); IX No. 107 and XIII No. 21, both of unknown origin. Cf. the dog scratching himself on a sealing from Haghia Triada, ASAtene 8/9, 1925/26, No. 47 Fig. 68.

69 Karo, Schachtgräber No. 394 Pls. 93. 94.

70 For the seal from Kalathiana see CMS II,1 No. 130. The theme of a lion devouring a man is unique in Aegean art. The motif occurs already in the 4th mill. B.C. in the art of the Near East and in 3rd mill. Egyptian art. The closest parallels for the Minoan seal which I could find can be seen in relief on an Early Sumerian stone basin dated ca. 3500–3300 B.C., and in an unfinished sculptured group of the same period (W. Nagel, BerlJbVFrühgesch 6, 1966, Pl. VIII,1–3 and Fig. 10). However, the sculptured group is dated by others in the 6th century B.C.; see e.g. Propyläen Kunstgeschichte XIV (1975) Pl. 177. For the fallen man on the Vapheio Cup see E.N. Davis, The Vapheio Cups (1977) 41.

71 Cf. for the steatite vase Evans, PM III Fig. 159 and P. Warren, Minoan Stone Vases (1969) No. P 473; for the Siege Rhyton Karo, Schachtgräber Pl. 122.

descriptions in stories that can be regarded as the predecessors of similar Homeric ones and which will certainly have circulated in oral form. Such stories would have been enough to stimulate a craftsman with the artistic qualities of the maker of the dagger — who himself no doubt had a thorough knowledge of a lion's appearance — to portraying a lion hunt in this way.

Concluding remarks

The possibility that lions lived in the wild in Crete during the Bronze Age can be discarded. The fact that there were such remarkably life-like depictions of lions to be seen on the island by LM I — as far as portrayal of anatomical details and behaviour is concerned — is, to my mind, partly due to the close contacts between the island and mainland Greece from the beginning of the Late Bronze Age. This would have enabled Minoan artists to observe real lions on the mainland.

In my opinion, it is not possible to make a distinction between Minoan and Mycenaean artists regarding their representation of lions. In the Late Bronze Age seals, seal impressions and other works of art were distributed over the whole Aegean area and, I suspect, played an important role as a 'pattern book' for artists. An artist could have used different examples to depict one particular subject.

It can be said that particular motifs enjoyed a certain preference in Crete, and others on the mainland. Gods accompanied by lions, suckling lions standing up, and solitary lions struck by a projectile are almost certain Cretan in origin.

Lion killers were perhaps more popular on the mainland, but the earliest known examples from Crete and from Mycenae are contemporaneous. This subject may well have reached the mainland not directly but via the island.

Art ist not zoology. In my opinion the Aegean artists deliberately allowed themselves to deviate from reality where they regarded it as advantageous or necessary. Examples are the lioness with mane and teats and the almost universal depiction of a male lion in situations where that is unrealistic. The flying gallop, the flying leap, probably also the lion which leaps onto the back of its prey and the animal looking back in full flight, are means by which to emphasize the speed, power and savagery of what Aegean artists actually saw, and in my opinion do not necessarily indicate lack of knowledge.

In comparison with the hundreds of Aegean depictions of lions, the number of 'realistic' ones is small and most of these are dated early in the Late Bronze Age but there is enough to prove that some artists had observed real lions. Representations from the Near East and Egypt, where these animals undoubtedly existed in far larger numbers than in the Aegean area, can hardly have served as examples, especially as far as the method of hunting is concerned — because in these areas traditional artistic conventions which usually only bore a limited similarity to real life, were strictly adhered to over a long period of time.

ICONAEGEAN AND ICONOSTASIS
AN ICONOGRAPHIC CLASSIFICATION AND A COMPREHENSIVE DATABASE FOR AEGEAN GLYPTIK

JANICE CROWLEY — ANTHONY ADAMS

The creation of the Iconaegean classification and the Iconostasis database is the result of collaborative research undertaken within the Department of Computer Science at the University of Tasmania, Hobart, Australia and in consultation with the Corpus der minoischen und mykenischen Siegel, Marburg, Germany. The authors are most indebted to Professor Arthur Sale of Hobart and to Professor Ingo Pini of Marburg for all their support. [1] In particular the authors wish to thank Professor Pini for his kind permission to digitise the drawings of the seal designs in CMS as the images in the database.

Over the years, there have been many scholars who have helped with discussion on Aegean archaeology and art and it is hard to know where to begin with thanks. Since the inception of this project, Professor Henri van Effenterre and Mme Micheline van Effenterre, remembering the difficulties of proceeding with a database some twenty years ago, have taken a great interest and we thank them for their pertinent observations and exhortations to continue. Professor Sir John Boardman has given us much helpful advice from his experience with the Oxford database on Greek vases. Professors Robert Laffineur, Wolf-Dietrich Niemeier and Jean-Claude Poursat have been positive in criticism and generous in offering their time to trial the classification and database. Dr Agnes Sakellariou and Professor Gisela Walberg have guided with wise counsel and Professors Klaus Kilian, Christos Doumas, Paul Astrom and George Bass have reminded us that a database of the glyptic will need to serve the wider needs of Aegean scholars. [2]

The first full exposition of Iconostasis and Iconaegean at the IVe Symposium international sur les Sceaux minoens et myceniens at Clermont-Ferrand allowed discussion and comment

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[1] Arthur Sale has opened the facilities of the Department to the project and provided a most pleasant 'home base' for a number of years now. Ingo Pini has shown continuing interest in the project and we are most appreciative of the time he has freely given us both in Marburg and in Hobart. Special thanks are also due to Walter Müller and Stefan Wildt for the many spirited and fruitful conferences at CMS in Marburg.

[2] We would like also to thank for their comments in enjoyable and stimulating discussions in various cities of Europe and/or Australia Edmund Bloedow, Christos Boulotis, Jan Bouzek, Anna-Lucia D'Agata, Katie Demakopoulou, Marie-Henriette Gates, Erik Hallager, Stefan Hiller, Sarah Immerwahr, Nanno Marinatos, Lyvia Morgan, Sarah Morris, Artemis Onassoglou, Tom Palaima, Paul Rehak, Wolfgang Schiering, Maria Shaw, Christina Televantou, Jennifer Webb, Michael Wedde, Judith Weingarten and John Younger.

which has been most helpful. We would like to thank all those participants who debated with us at the Symposium and particularly those who replied to the follow-up questionnaire with criticisms and suggestions, with warnings and supportive sentiments. [3]

To all these scholars who have given of their time to discuss Iconaegean and Iconostasis with us we are greatly indebted though we must take the responsibility for whatever imperfections remain.

The following pages outline the development of the classification and database achieved to date, giving insight into their design in Part I, presentation of the format of their publication in Part II and explanation of their usage in Part III. Finally, some Concluding Comments assess the usefulness of Iconaegean and Iconostasis to Aegean researchers.

PART I: THE DESIGN OF THE ICONAEGEAN CLASSIFICATION AND THE ICONOSTASIS DATABASE

The Iconaegean classification is a new iconographic classification of Aegean glyptic art. It is shaped by the dictates of Aegean artistic design so that an apposite schema uses a carefully defined vocabulary of terms.

The Iconostasis database is a custom-made comprehensive database for encoding information on Aegean glyptic including iconographic data classified by Iconaegean. It is specially designed to meet the needs of researchers who are working on material with a high visual content in that it provides an image of the material along with descriptive text. It also provides the facility for individual scholars to program the database by adding their own research notes.

In creating the Iconaegean classification, the most important premise is that the classification should evolve out of the material being classified. The repetition of favourite themes and compositional details is a feature of Aegean art and, most especially, of Aegean glyptic. This repetition has long been recognised and is reflected in the existing classifications of designs in various artistic media, many of which have helped with the creation of Iconaegean. [4] However there is need for a more comprehensive schema and for a tighter vocabulary. Respecting the material, we have made the concept of the icon the core classifying principle, the best example of the icon the defining prototypical and the *Icon* level the core division of the classification. This theoretical basis for the classification has already

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3 Joan Aruz, Marijke Ballintijn, Helen Huges-Brock, Jean-Pierre Olivier, Wolfgang Schiering, Judith Weingarten, Michael Wedde, John Younger. We look forward to continuing the correspondence.

4 We are mindful of the insights gained and the terms taken from Matz, FKS; A. Furumark, The Mycenaean Pottery (1941); E. Vermeule, Greece in the Bronze Age (1964); Walberg, Kamares; J.-Cl. Poursat, Les ivoires mycéniens (1977); Younger, Iconography; Morgan, MWPT. Special mention should be made of Onassoglou, DtS, whose classification of this material has been accepted and used unchanged in Iconaegean.

been expounded in a trilogy of papers [5] presented at successive International Aegean Conferences but a short explanatory quotation from the third paper is in order here. "The icon is the memorable image... It is compounded of content and shape. For each favourite and recurring theme in Aegean art there are several icons which can be used to portray it. The skilled artist chooses the icon whose own intrinsic shape is most compatible with the shape of the containing field of the design. Is it a circle, a rectangle, a triangle, an oval? For each shape the artist can draw from the repertoire an icon to render the theme appropriately... This impulse to compose with icons... [is]... termed the icon imperative."

With the Iconostasis database, the first design decision taken when this work began in 1986 was that the database had to be a *graphical* one, *i.e.* it was essential that images were stored in the database as well as the more usual textual information. At that time there was little choice of either computer or commercial database that could meet this requirement. Only the Macintosh-computer and peripherals were capable of easily digitising and storing the images and Odesta's Double Helix-database of handling them. Until late 1992 we continued to use the system that we used from the beginning, merely upgrading computers and software over the years and the demonstration at the Clermont-Ferrand Symposium relied on this Helix system. However, many new commercial database packages operating on all the common computer styles are now on the market and several could handle our seal and classification information. Following the Clermont-Ferrand Symposium, with the database now at an advanced stage in the design, we considered the options for changing the software. Though the new software packages readily available include those with colour reproduction and photographic input as well as optical discs, we have decided to keep to the simplest software readily available which will still do justice to the material. Accordingly, we have not moved into colour or photographic quality input since the storage requirements for these make the database very large and expensive. We have not moved into mainframe computers as we have always deemed it necessary to provide a database which would be readily available within the normal resources of the scholarly community. Taking these constraints into account, we have decided to change the software system to Microsoft's FileMaker Pro. This will make the database available on a variety of personal computers, Macintosh- and PC compatible types, at a reasonable cost but will still allow the creation of a full and flexible database. At the time of writing this paper the change to the new system has been effected and all references to the database in Part II and Part III are to the FileMaker Pro software on a Macintosh computer. Participants at the Clermont-Ferrand Symposium will not, however, see any difference in the presentation because, although the underlying computer system is different, the format that the user experiences is the same.

Both Iconaegean and Iconostasis are provisional in the sense that both will undergo modification in the course of working further with the material. A decision to change one or

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[5] J.L. Crowley in: Transition 203ff. Pls. XLVII. XLVIII; J.L. Crowley in: R. Laffineur – L. Basch (eds), Thalassa: L'égée prehistorique et la mer, Actes de la troisième rencontre égéenne internationale de l'université de Liège, Calvi Corse, 23–25 avril 1990, Aegaeum 7, 1991, 219ff. Pls. LIX. LX; J.L. Crowley in: Eikon 23ff. Pls. V–VII.

more of the terms because a more suitable term has been coined can easily be accommodated. In the event of a single seal or even a new seal group with unique characteristics appearing, the Iconaegean classification can be extended. Similarly, the Iconostasis database has been designed to meet the requirements of this particularly visual body of Aegean material and it is expected to accommodate all new finds. In the event of some quite unforseen development, the database has built-in flexibility which should be sufficient to meet these demands, including any new avenues of enquiry they may open. With wider trialing of the classification and database due by the end of 1993, we estimate that it will take at least a further three years to classify all the designs and enter the information required from the CMS volumes. Thus we envisage that the earliest Iconaegean and Iconostasis could become widely available would be the end of 1996.

PART II: PUBLICATION OF THE ICONAEGEAN CLASSIFICATION AND THE ICONOSTASIS DATABASE

Final publication of Iconaegean and Iconostasis will take the form of the database on disk and an accompanying book.

The database will be available in two forms, one suitable for scholars using Macintosh computers and the other for those using IBM style personal computers. It is also likely that X-window terminals to mainframe computers will be common enough by then to make these a desirable combination as well. It is estimated that the storage required to hold the information on some 10,000 seal faces will probably be a hard disk of 100 megabytes.

The book will explain both the design and usage of the Iconostasis database and the Iconaegean classification and will include the following chapters:

1 *Parameters for Creating Iconaegean and Iconostasis*

2 *Iconaegean Classification*

3 *Iconaegean Dictionary of Iconographic Terms*

4 *Iconostasis List of Key Words*

5 *SealData for the Prototypical Seals*

6 *Iconostasis Manual*

The content of each of these chapters is outlined below.

1 Parameters for Creating Iconaegean and Iconostasis

These parameters are delineated by ten rules which are self-contained and self-explanatory. APPENDIX 1 lists these rules and a close reading of them will give the best introduction to the design principles underlying this particular database and classification. Important initiatives in iconographic classification are the concept of the icon and the role of the prototypicals. Important features in the design of the database are the provision of an image and the facility to customise the database to include the user's own research notes. The image being available at all times is a pertinent reminder that descriptive text should never replace the original material.

2 Iconaegean Classification

This is a new classification of the iconography of Aegean glyptic, simple in schema and in terminology.

The schema comprises five levels of description; *Category, Theme, Icon, Element, Syntax*. The first three levels are in hierarchical structure while description in the last two levels specifies the detail of the design. Thus designs are classified by their main subject matter into the *Category, Theme* and *Icon* levels and then the detailed descriptions of the *Element* level, for the component parts of the design, and of the *Syntax* level, for the compositional features, are added. The icon is the most important division of the classification from the point of view of artistic creation and APPENDIX 2 gives the example of the icon terms in classification order for the designs involving human figures. However the schema could not start with the icon level or even with the themes that group the icons. Such a schema would be too 'flat' to facilitate sorting designs in a database. Accordingly some overall ordering division is required to provide the first level of the hierarchical structure. Taking the content of the designs as the deciding factor, general terms are chosen to name the nine *Category* sections [6] — humans, human constructs, fantastic creations, fauna, flora, sea life, geometric, script, other. Then the levels of *Theme* and *Icon* organise the content detail down from this first level. Finally the *Element* and *Syntax* levels provide various details of the composition to complete the classification.

The terminology giving the descriptions within this classification schema is simple also. The iconographic terms used are ordinary words (in English) chosen with restraint. There are only three abbreviations and one conflated term. [7] The handful of specially coined terms are

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[6] The usefulness of a nine part system for design content classification has been aptly demonstrated by H. van der Waal in his ICONCLASS classification scheme for western European art. This classification system has been the source of much inspiration in the shaping of Iconaegean.

[7] VIP – Very Important Person, tca – tri-curved arch, ueo – unexplained object, trigrosette – triglyph and half rosette.

always normal words or are compounded out of normal words. [8] Many of the terms chosen are already in widespread use following pioneering work in Bronze Age iconographic studies, though some are here more restricted in their usage or have had their name slightly changed to fit a pattern of nomenclature evolved for Iconaegean. [9] Some of the terms take licence with zoology, botany and geology [10] but it is unlikely that the ancients shared our scientific classifications. It may come as a surprise that, except for the special figures of 'Mistress' and 'Master', there are no terms for differentiating the sexes, simply 'human figure' or 'human head'. The truth is that in relatively few instances is the sex absolutely clear from the depiction on the seal and so it is sufficient to access the images through the more general terms. [11] Individual scholars may then make their own assessment. Exercising economy of choice in creating the terminology means that it is possible to limit the vocabulary to a manageable size. [12] This is achieved by careful grouping of details, through thoughtful selection of the best descriptive word in the first place and then by precise definition of the term so that periphrasis can be avoided. Attention should be drawn to the use of the sections 'various' and 'other' in the classification schema. These sections perform the useful duty of providing filing places for iconographic content which does not clearly fit any of the named sections. If the assemblage in any one of these 'various' or 'other' sections comes to show a distinct grouping through heretofore unrecognised common characteristics then a new section can be created and named by an appropriate term. In the meantime these sections allow all designs to be placed in the classification.

3 Iconaegean Dictionary of Iconographic Terms

This dictionary lists in alphabetical order, and defines, all the terms of the Iconaegean classification. APPENDIX 3 gives examples of the entries under A in the dictionary. For each term the definition comprises a note as to the level in the classification it occupies, an explanation of its meaning and a reference to a prototypical where its usage can be seen. In the case of the prototypical itself, the illustration from the database (reduced in size) is also provided.

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8 Examples: net capture, crunching, grounding, bird in the air, antithetical group, circling twist. As all terms are defined in the Dictionary of Iconographic Terms immediate identification is possible.

9 Where a decorative design is a frieze shape it is termed a band and where it is an all-over design it is termed a pattern. Consistency in terminology is also sought. The petaloid loop when elaborated into a border is not termed a foliate band here but a petaloid band.

10 The dolphin is listed among fishes! Using the term tree to cover all sizes of trees and bushes helps when seal designs give no indication of scale or are too stylised to be sure of content. The terms rocky ground and rocky water seem to describe what is actually shown and do indicate the artistic parallels.

11 It is true that explicit secondary sex characteristics do identify many figures as female but what usually passes for a sex identification is an interpretation from hair styles, clothing or accoutrements.

12 Some further terms are under consideration for inclusion and so is the provision of a sentence description of the design at the *Syntax* level which includes a directional component.

4 Iconostasis List of Key Words

This is a list of all the key words used in entering the seal information and they are the means by which the interrogation of the database is managed. APPENDIX 4 gives examples from the List of Key Words. In full it comprises the iconographic terms (set out in the classification and defined in the dictionary), the standard descriptions for preservation and discussion and the terms needed to express the fact entries from the CMS (seal type, seal size, material, excavated or acquired, date and present location). The List of Key Words is set out under the entry headings for the SealData holdings in the database and then under each heading the words are listed alphabetically.

5 SealData for the Prototypical Seals

Printouts of the SealData entries for the prototypical seals are also included in the book because they are the defining examples for the iconographic classification and because a hard copy of a selection of seal records consolidates understanding of the format of the database. APPENDIX 5 shows the printout of the SealData holding for one particular seal, CMS I No. 11, numbered in the Iconostasis database as IS 11. Note the one-page format. This is what appears on the computer screen and is what comes as the printout of the seal record.

6 Iconostasis Manual

The manual explains how to use the database and contains copious diagrams to facilitate understanding. It provides all the information usually expected in the instruction manual which forms part of the acquisition of a database. Some of the explanations from the manual are used below in Part III.

PART III: HOW TO USE THE ICONAEGEAN CLASSIFICATION AND THE ICONOSTASIS DATABASE

Understanding the Format

The database consists of two linked files, one containing information about the Iconaegean classification, called *Classification* and the other containing information about each seal, called *SealData*. The terms listed as the Key Words are the terms used for the entries in the *Classification* and *SealData* files and they are also the terms which are used for searching the database.

The *Classification* file in the database can be accessed by a single command and the terms scrolled through and, if desired, printed out.

The *SealData* file in the database can likewise be accessed by one command and the information on each seal can be scrolled through and, if desired, printed out. If you look at APPENDIX 5 you will see the printout of the *SealData* holding for one particular seal, IS 11/CMS I No. 11. The one-page format contains four components of information:

IMAGE
FACTS
ICONOGRAPHY
OWN RESEARCH

The IMAGE component comprises a digitised representation of the actual seal design taken from the CMS drawing. It also lists two identification numbers; one is a unique number for each seal entry in Iconostasis and uses the prefix IS, the other is the identification by CMS volume and number. Where there are multiple seal faces on the one seal a separate IS number is given to each seal face.

The FACTS component comprises the basic descriptive information taken directly, without change, from the CMS volumes and is handled in seven fields; Seal Type, Seal Size, Material, Excavated or Acquired, Date, Location. [13]

The ICONOGRAPHY component deals with the iconographic content in three fields; Preservation, Analysis, Discussion. The Preservation field provides an assessment of the current state of preservation of the design on the seal. The Analysis field sets out the iconographic analysis of the seal design in the terminology of the Iconaegean classification while the Discussion field allows for extra comment beginning with the assignation of prototypical if appropriate.

The final component, OWN RESEARCH, is provided as a blank field for individual scholars to enter their own notes and thus customise the database for their own research. The effect of this customisation is that, along with all the CMS and iconographic information already provided in the database itself, the individual scholar can have to hand for each seal, the aspects of glyptic that are of particular interest to her or him whether it be more detail on the dimensions, comments on inscriptions, observations on seal-cutting techniques, evidence of sealings being attached to various materials, notes on stringholes, attributions, personal

[13] Consideration was given to correcting CMS entries where necessary before entering them into the database. However in discussions with Ingo Pini we decided against attempting this. At least, with this decision, there is consistency in that what is in the FACTS section in the database is what is in the CMS. Scholars who have detected problems with CMS entries can enter their own corrections when they program their OWN RESEARCH section.

iconographic summaries, whatever... If the scholar devises a set of standard terms for her or his entries then it will also be possible to search on this OWN RESEARCH field. [14]

Searching the Database

When you wish to look through the entries, you simply give the command 'BROWSE'. This enables you to move through the holdings looking at any details you wish.

When you wish to search the database, you simply give the command 'FIND'. A query form will appear on your screen and you can type the term you want to find in the appropriate box. The query form for the entries in the SealData file is in exactly the same one-page format as the screen format and the printout for each seal, except that the query form has a blank box next to the heading so you can type in the term that you want. When you type the term you want in the appropriate box and give the command 'FIND' again, the database will call up to the screen the seal entry you want.

You may find any particular seal by typing either the IS number or the CMS number in the appropriate IMAGE box and then giving the command 'FIND'.

You may search in any of the *SealData* fields in the FACTS or in the ICONOGRAPHY components or across any combination of these fields that you wish. Some examples of how you can query the database are:

> If you wish to make a simple query like:
>
> *"Find all the seals made of gold."*
>
> then you simply go to the field called Material and type "gold" in the box and give the command "FIND". The database will retrieve all the seals made of gold and you can scroll them through to view them and print out any one of them or all of them.
>
> If you wish to make a query containing two or more specific details like:
>
> *"Find all seals made of gold excavated at Mycenae showing shields."*
>
> then you go to the field called Material and type in 'gold', then go to the field called Excavated and type in 'Mycenae', then go to the field called Element and type in 'shield' and then give the command to find. The database will retrieve all the seals made of gold which were excavated at Mycenae and which have in their design the illustration of a shield. You can then scroll them through to view them and print out any one of them or all of them.

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[14] The original plan for a programmable section taken to the Clermont-Ferrand Conference was to have two databases, one which was for general use and a second one which was programmable for specialist scholars. However, discussion at the Conference convinced us that the programmable section was seen as a very useful feature and so we now plan on producing only one database which has the programmable OWN RESEARCH section.

When you want an iconographic reference, then querying either the *Category* or *Theme* or *Icon* fields will give a quick sorting. For instance, if you want to look at depictions of humans occupied in the bull sports, then simply type 'bull sports' in the box for the field called *Theme* and then give the command to find. The database will retrieve these depictions and you can view them on the computer or print them out as you wish. Similarly if you want to find depictions of the animal attack scene where a predator crunches through the spine of its prey, then simply type 'crunching' in the box for the field called *Icon* and give the command to find. The database will retrieve for your use the seals where the crunching is the main subject matter.

When you wish to make an exhaustive search of the database then the *Element* and *Syntax* fields are the ones to use. For a particular descriptive detail, say a griffin, then go to the *Element* field, type 'griffin' in the *Element* box and give the command to find. [15] For a particular compositional feature, say an antithetical group, then go to the Syntax field, type 'antithetical group' in the *Syntax* box and give the command to find.

If you are a scholar with a particular interest in iconography and/or artistic composition, it is envisaged that you will regularly use all the fields in the ICONOGRAPHY component to conduct your searches. A little experience using the Iconaegean classification to become familiar with the terminology will bring confidence to exploit the full range of possibilities for searching the material. If you are a scholar whose main interest lies in other areas of Bronze Age Aegean research, then it is envisaged that you will make most use of the fields in the FACTS component and the *Element* field for iconography. All scholars will no doubt take advantage of the possibilities offered by the programmable OWN RESEARCH section.

Concluding Comments: How Useful Will Iconostasis and Iconaegean Be?

In this first full exposition of Iconaegean and Iconostasis the main features have been explained, their strengths argued and the advantages of their use presented. It is also perhaps pertinent to remind users what has not been attempted in their design and to strike a cautionary note.

The Iconaegean classification does not attempt to provide a description of the minutiae of the design details since such a description would be extremely lengthy for almost all seals, even for the floral and geometric designs. Further, Iconaegean does not attempt to answer definitively the questions of identification for the many enigmatic depictions in Aegean glyptic. Both choices have been deliberate and both may be disappointing to some people. However, by making these two choices at the outset, we believe that important gains have been made in the furthering of Aegean iconographic studies. The first is that there is now, in

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15 While searching the *Element* section will allow you to find most items by name (e.g. bull, sphinx, rosette), combinations of terms across the *Icon, Element and Syntax* levels will allow you to search for much more specific detail.

the Iconaegean classification, a relatively clinical standard vocabulary for Aegean iconography. It is also a flexible vocabulary in the sense that it can be refined and easily changed when there is agreement on a better term or about a particular interpretation. Thus there is no sense of being 'trapped' in terms that were long ago decided but which cannot be modified because of classification constraints.

The cautionary comment we must make at this point is to remind users of the Iconostasis database that time spent at the screen and keyboard cannot replace intimate knowledge of the source material itself. Ultimately, the researcher will always need to return to the primary publication, the CMS, and to the first-hand observation of the actual seals and their impressions.

However, while we do take these two issues into account, we still believe that the creation of the Iconaegean classification and the Iconostasis database will prove a breakthrough for Aegean scholars. In summary:

Iconaegean is a new iconographic classification of Aegean glyptic art.

Its great virtues are its simplicity in schema, its standard terminology and the fact that its form has been shaped by the dictates of Aegean artistic design.

Iconostasis is a custom-made comprehensive database for Aegean glyptic.

It is specially designed to meet the needs of researchers who are working on material with a high visual content in that it provides an image of the material along with descriptive text. It is also specially designed for encoding iconographic data classified by Iconaegean.

Iconostasis and Iconaegean will be widely available to scholars.

They will be marketed within a cost structure that will readily allow their acquisition by universities, libraries and individual scholars.

The database is easy to use.

It has been created to be as user-friendly as possible and it is expected that its use on either Macintosh or IBM PCs will not cause any prolonged difficulties even to scholars who have had no previous experience with computers.

Scholars can readily access and search the CMS volumes for facts.

Details of seal type, seal size, material, excavation or acquisition, date and current location can easily be found. At present this can only be done by a time-consuming search completed by hand, turning the pages of all the CMS books.

Scholars can readily access and search the CMS volumes for iconography.

At present this cannot be done from the CMS descriptions because there is no consistency in terminology from volume to volume either in the individual seal descriptions or in the indices. The new Iconaegean classification provides this standard terminology and the Iconostasis database allows the access, searching, collating and printing out of the required iconographic detail.

The database is programmable by individual scholars.

Researchers can enter their own notes in the section provided, thus customising the database to their own requirements while still enjoying all the benefits of having the factual and iconographic content of the CMS volumes ready to access and query.

Scholars will, of course, make their own assessment of the usefulness or otherwise of Iconostasis and Iconaegean. For our part we are optimistic that their creation will bring a new accessibility to Aegean glyptic and will encourage further detailed study of the whole body of Aegean art.

APPENDIX 1
PARAMETERS FOR CREATING ICONAEGEAN AND ICONOSTASIS

1 The Iconostasis database encodes both image and text and is programmable.

The Iconostasis Database carries a file called *Classification* which sets out the Iconaegean Classification and lists all the iconographic terms. The database also carries a second file called *SealData* which holds information on each seal including an image based on the CMS drawing of the seal design, factual data from the CMS volumes, an iconographic analysis of the seal design and a section in which users may enter their own research notes.

2 In the Iconostasis database, access and retrieval are by key words.

The querying of the database and the retrieval of information from the files are carried out by using the key words which are specified in the Iconostasis List of Key Words. The key words are listed alphabetically under the various entry headings.

3 The Iconaegean classification encompasses all seal, signet and sealing designs.

Insistence that the classification covers all designs ensures that all discussions will be firmly based on the whole of the material available and not, as has often been the case in the past, on a few pieces which may not even show characteristic features.

4 The Iconaegean classification is sourced only in the seal designs.

Working only with the iconography of the seal designs provides an internally consistent classification. This avoids circular arguments where definitions are drawn from other artistic media and used to define the seal iconography, which is itself then used to classify other designs.

5 The Iconaegean classification defines its terminology by reference to prototypicals.

These prototypicals are the particularly detailed and finely worked seals which give classic statements of the icons. The term 'prototypical' conveys the sense of the most characteristic example and it usually represents the fullest development of a type. The term is used in contradistinction to 'prototype' which means the first, and often therefore embryonic, example from which others have developed. The term 'icon' is used for the memorable image. The impulse to compose with icons is the compositional imperative in Aegean art. The icon is compounded out of meaning and shape. It may be a simple bold design or it may be an involved image with many elements and with particular conventions for its portrayal within the seal design shape. One theme may need a series of icons to give the full rendition and it is characteristic of Aegean art that there are a relatively small number of themes and they are repeatedly handled by means of the same icons. Thus the classification evolves out of the material being classified and a set of standard terms which describe the content and composition of the designs is developed. These terms comprise some of the key words mentioned in supra No. 2 and each iconographic term is explained in the Iconaegean Dictionary of Iconographic Terms with reference to, and in the case of the icon, illustrated by, the defining prototypical.

6 Prototypical seals must have archaeologically attested provenance.

If the best example of an icon occurs on a seal which is not archaeologically attested then the next best example which has an archaeological provenance becomes the prototypical for this icon. This procedure provides the means to avoid basing a classification on material that may be forged or where only a stylistic date can be given. It will also ensure that a circular argument is not entertained as is sometimes the case when stylistic dating applies — pieces which have been stylistically dated are used to define the characteristics of a seal design or of an artistic period and then these characteristics are subsequently used to define an artistic type or to date other pieces.

7 All descriptions 'read' the seal from the impression.

The usual procedure for discussing a seal design from the impression is followed here. This provides consistency for comparison and for the standardising of the image. Where it appears that some pieces may have been created with the intention of being 'read' in the original this is noted in the entry. The designs are to be read first for the main impact of the subject matter and then down to lesser detail (see infra No. 10).

8 All descriptions are to be as objective as possible in delineating the design.

Terms that are interpretative or emotive are avoided. If a human figure appears to be singled out by position or clothing it is not termed a 'goddess' or 'priest' but a VIP — for Very Important Person. A scene is only allowed to be 'cult' when the evidence for this is in the illustration. With certain enigmatic motifs, terms like 'ueo' for unexplained object will be retained until a satisfactory description is agreed.

9 The Iconaegean classification has five levels of description.

The seal designs are classified in five levels, the first three being in hierarchical arrangement: *Category, Theme, Icon, Element, Syntax*. At the first level, *Category*, there are nine subject choices and these are further refined by the *Theme* and *Icon* levels. The *Element* level provides fine detail in describing the constituent elements of the *Icon*. The *Syntax* level also provides fine detail in analysing the artistic composition. The *Syntax* level thus records artistic conventions and recognises the constraints imposed by the need to fit the content to the shape of the seal design.

10 Five principles govern the placement of terms in the Iconaegean classification.

Each seal design is named for its main topic (see supra No. 7) and then the artistic detail to render this topic follows. This sequence of description reflects the creative process itself in that the desire of the artist must originally be to communicate an idea or display a certain decoration and detail of how to do this is a subsequent decision. The Iconaegean classification reflects this ordering in the five principles:

important subject matter to detail

humans first

animate to inanimate

symbolic through ordinary to stylised

peaceful to war/destruction.

APPENDIX 2
ICONAEGEAN CLASSIFICATION (PROVISIONAL)

Category 1 humans

Theme A	symbolic	*Icon*	a	procession
			b	mistress of animals

			c	mistress of animal
			d	master over animals
			e	master over animal
			f	human with familiar
			g	symbolic various
Theme B	cult	*Icon*	a	procession
			b	shaking the tree
			c	holding the boulder
			d	epiphany
			e	attending the cult object
			f	riding the sacred boat
			g	cult various
Theme C	VIP	*Icon*	a	procession
			b	human head
			c	human figure
			d	audience
			e	holding the weapon
			f	VIP various
Theme D	bull sports	*Icon*	a	approach
			b	toss
			c	somersault
			d	swinging
			e	goring
			f	trampling
			g	net capture
			h	bull sports various
Theme E	ship scene	*Icon*	a	ship on shore
			b	ship at sea
			c	ship
			d	ship scene various
Theme F	war and hunt	*Icon*	a	war duel
			b	hunt duel
			c	war scene
			d	hunt scene
			e	chariot scene
			f	war and hunt various

Theme G	stylised humans	*Icon*	a	procession
			b	group
			c	human figure
			d	human with object
			e	human body part
			f	stylised humans various
Theme H	humans other			

APPENDIX 3
ICONAEGEAN DICTIONARY OF ICONOGRAPHIC TERMS (PROVISIONAL)

A (Examples)

action pose	*Syntax*	see	IS 11	CMS I No. 11

human figure in any lively action pose, i.e. not standing (stepping) or sitting

animal attack	*Theme*	see	IS 185	CMS I No. 185

where one or more animals as predator chase and/or seize an animal or animals as prey

animals at the pillar	*Icon*	prototypical	IS 219	CMS I No. 218

an antithetical group, variant of animals at the tree of life, with the pillar substituted for the tree of life

CMS I No. 218

animals at the tree of life	*Icon*	prototypical	IS 232	CMS I No. 231

an antithetical group where two animals flank, may nibble at, the central foliate symbol

CMS I No. 231

antithetical group *Syntax* see IS 144 CMS I No. 144
a particular antithetical arrangement which places two figures, each being the mirror image or a very close match of the other, about a central figure or object

audience *Icon* prototypical IS 101 CMS I No. 101
a VIP is seated and one or more humans of lesser status stand in the presence; termed 'audience' in the way one says "the king/queen grants audience to ..."

CMS I No. 101

APPENDIX 4
ICONOSTASIS LIST OF KEY WORDS (PROVISIONAL)

IMAGE The image is the drawing of the seal impression in CMS.

Number The entry lists the Iconostasis Number and the CMS Number.

IS No. CMS No.

FACTS All terms in the FACTS section are the terms used in CMS and entered, in English, into the database.

Seal Type The entry lists the shape of the seal or preserved material. Extra notes follow this primary entry to describe details.

Examples:
amygdaloid, cushion-shaped, lentoid, signet ring, stamp seal

Seal Size The entry lists measurements in centimetres for the seal face, diameter or breadth and length as appropriate. For a sealing example, two dimensions are given.

Example:
1.5 2.0

Material The entry lists the composition of the seal or preserved material.

Examples:
agate, amazonite, amber, amethyst, carnelian, chalcedony, clay, conglomerate, glass, gold, gold with bronze core, haematite, jasper, onyx, rock crystal, sard, sardonyx, silver, steatite ...

Excavated The entry lists the archaeological provenance with up to three details for the site name, general context and particular context.

Examples:
Mycenae, Tiryns, Pylos...
Acropolis, chamber tomb, Grave Circle A, Grave Circle B, house...
Grave No., House of the Shields, Room No., SW Incline ...

Acquired The entry lists acquisition when there is no archaeological record. This entry and the one above are mutually exclusive.

As this is a free text entry to suit the individual case, there are no KEY WORDS listed.

Dated The entry lists the date given for the seal in the CMS.

Examples:
EM, LH II, LH III ...

Location The entry lists the present location of the seal with up to three details for city name, museum and/or collection and inventory number.

Examples:
Athens, Iraklion, New York, Paris ...

Archaeological Museum, Cabinet des Médailles, National Museum ...
2859, 6511α...

ICONOGRAPHY All terms in the ICONOGRAPHY section are terms newly coined or newly defined for use in Iconaegean.

Preservation The entry lists present condition of the seal and the design.

Examples:
excellent, damaged, worn, fragment, forgery, design intact ...

Analysis The iconographical analysis of the seal is provided under 5 headings.

Category:

fantastic creations, fauna, flora, geometric, human constructs, humans, other, scripts, sea life

Theme

Examples:
animal attack, animal study, attire and arms, bullsports, circular, crossing, cult, cult object, fishes, flowerage, foliage, hybrid human, linear ...

Icon

Examples:
altar, animal body part, animal head, bucrania, animals at the pillar, animals at the tree of life, arcade band, attending the cult object, audience, war scene, bird woman, bull man, chariot scene, mistress of animals ...

Element

Examples:
animal body part, animal head, bird, bow, branch, building, bucrania, bull, cat, dado, deer, marbling, petaloid, ship, tree ...

Syntax

Examples:
action pose, addorsed, antithetical group, attacking, circle, circling composition, circling twist, climactic point, diagonal play ...

Discussion The entry first lists whether the design is a prototypical for the icon and then it is available for free text.

OWN RESEARCH The entry is a free text entry as the Researcher desires.

APPENDIX 5

SealData

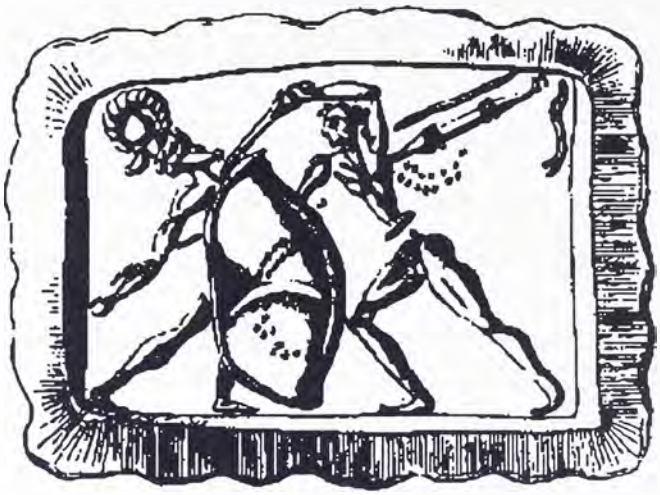

IMAGE	**Number**	**IS**	11	**CMS**	I.11

FACTS	**Seal Type**	cushion-shaped
	Seal Size	1.2 1.8
	Material	gold
	Excavated	Mycenae, Grave Circle A, Grave III
	Acquired	
	Dated	LH I
	Location	Athens, National Museum, 35

ICONOGRAPHY

Preservation	excellent, design intact	
Analysis		
Category	1	humans
Theme	F	war and hunt
Icon	a	war duel
Element	human figure 2, clothing, helmet, weapon, shield	
Syntax	rectangle, elevation view, self-contained, focus, action pose 2, climatic point, diagonal play	
Discussion	prototypical war duel	

OWN RESEARCH

DIE SPÄTEN MYKENISCHEN SIEGEL AUS WEICHEM STEIN ÜBERLEGUNGEN ZU BEDEUTUNG UND FUNKTION

AURELIA DICKERS

Die späten mykenischen Siegel aus weichem Stein sind optisch wenig attraktiv und bieten auf den ersten Blick kaum Ansatzpunkte für eine Bearbeitung. Wohl nicht zuletzt aus diesem Grund fanden sie in der weitgehend kunsthistorisch orientierten und objektbezogenen Siegelforschung bislang kaum Beachtung. Wegen der geringen Qualität und der extremen Schematisierung wurden sie in der älteren Forschung in die ausgehende Spätbronzezeit, meist in SH IIIC, datiert [1]. Erst Younger, der sich auf der Grundlage einer erheblich verbesserten Quellenlage ausführlicher mit diesen Siegeln befaßte, erkannte in ihnen stilistische Gruppen, die einen größeren zeitlichen Rahmen umfaßten und die Phase SH III charakterisierten [2].

Bei genauerer Betrachtung besitzen gerade die späten Siegel aus weichem Stein Merkmale, die eine Untersuchung unter verschiedenen Gesichtspunkten ermöglichen, die sowohl das Material selbst als auch seine Herkunft berücksichtigt. Die Siegel sind in großer Zahl vorhanden und lassen sich stilistisch wie zeitlich leicht bestimmen. Sie charakterisieren einen geschlossenen Zeitraum (SH IIIA2–C) und stammen zum großen Teil aus Fundkomplexen, die lokalisiert und wissenschaftlich ergraben sind. Herstellungs- und Fundort bzw. Fundregion dürften mehrheitlich in etwa identisch sein.

Der folgende Beitrag befaßt sich mit Funktion und Bedeutung der späten mykenischen Siegel aus weichem Stein. Anhaltspunkte für entsprechende Überlegungen bieten sich trotz des in vieler Hinsicht unbefriedigenden Forschungs- und Publikationsstandes in der Ägäischen Vorgeschichte und der Sphragistik.

Die späten festländischen Siegel aus weichem Stein können im wesentlichen in zwei Gruppen untergliedert werden, die ikonographisch und stilistisch kaum miteinander zu verbinden sind: in die sogenannte 'Mainland Popular Group' und in die 'Fluorite Group' [3]. Die

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* Diesem Beitrag liegt eine 1992 am Vorgeschichtlichen Seminar in Marburg eingereichte Dissertation mit dem Titel »Studien zur spätbronzezeitlichen Weichsteinglyptik: Die 'Mainland Popular Group' und andere zeitgleiche Siegelgruppen« zugrunde. Sie wird derzeit für den Druck vorbereitet.

Als Vorlage für die Verbreitungskarten diente J.L. Bintliff, Natural Environment and Human Settlement in Prehistoric Greece (1977) 31 Abb. 1.

Abbildungsnachweis: Abb. 1a–c; 5a–c; 6a–c; 7a–c stammen aus den Archiven des CMS.

1 Sakellariou, MS 108f. Boardman, GGFR 61. V.E.G. Kenna, CMS VII 243.

2 Younger, Chronology 439ff. Younger, Aegean Seals VI 65ff.

3 Die Bezeichnung der beiden Siegelgruppen geht auf Younger zurück. s. ebenda 65. 71.

gepreßten Glassiegel gehören aufgrund ihres Charakters, ihrer Zeitstellung und ihrer Verbreitung in denselben Zusammenhang [4].

Abb. 1a–c a) CMS V Suppl. 1B Nr. 11; b) Kenna, CS Nr. 104; c) CMS V Suppl. 1B Nr. 175.

Bei der 'Mainland Popular Group' handelt es sich um eine wenig qualitätvolle Siegelgruppe, die im gesamten Verbreitungsgebiet der mykenischen Kultur belegt ist. Sie ist, entsprechend dem allgemeinen Forschungs- und Publikationsstand, zum großen Teil aus Gräbern bekannt. 491 Siegel können derzeit dieser Gruppe zugewiesen werden. Bei 389 Exemplaren ist zumindest der Fundort bekannt. 45% dieser Siegel stammen aus Gräbern, 11% aus Siedlungen und 9% vermutlich aus Heiligtümern [5]. Die Siegel bestehen in der Regel aus dunklem, steatitartigem Stein und sind lentoid mit konvex oder konisch gebildeter Rückseite. Die Siegelbilder zeigen einfache und stilisierte Tierdarstellungen, reduzierte Abbildungen von Tierköpfen und Ornamente unterschiedlichster Art. Das zentrale Motiv wird dabei in der Regel dicht von überwiegend linearen und zweigartigen Füllelementen umgeben *(Abb. 1)* [6].

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[4] Die Glassiegel wurden von Pini zusammengestellt und ausführlich besprochen. s. I. Pini, JbZMusMainz 28, 1981, 48ff. s. dazu auch Younger, Aegean Seals III 51ff. Letzterer weist die gepreßten Glassiegel dem »master of the goldplated box NM 808–811« zu, der in die frühe Spätbronzezeit datiert. Diesem, wenn auch mit Vorsicht geäußerten, Zeitansatz widersprechen die Kontexte, die ausschließlich in SH IIIA1–C gehören.

[5] Die verbleibenden Stücke (35%) sind Einzelfunde.

[6] Die bis 1987 bekannten Siegel sind über nach Bildthemen geordnete Listen auffindbar, die von Younger vorgelegt wurden. s. Younger, Aegean Seals VI 65ff. Dieser Beitrag ist jedoch aus verschiedenen Gründen problematisch. Die stilistisch-ikonographisch gebildeten Untergruppen sind vielfach nicht überzeugend. Ihre Bezeichnung ist meist suggestiv und häufig kaum passend. Auch die Identifizierung der Vierfüßler als Rinder, Ziegen/Agrimia und Pferde scheint mir mitunter gewagt zu sein. Die Wiedergabe der Tiere reicht mehrheitlich nicht für eine genaue Bestimmung der Gattung aus. Mitunter taucht ein und dasselbe Siegel unter verschiedenen, sich widersprechenden Gliederungspunkten auf: CMS X Nr. 174 unter der Rubrik Rinder mit Hufen in Pose 1A sowie Pose 2 und V Nr. 175 an zwei verschiedenen Stellen innerhalb der Kreismotive. Es werden zudem Siegel kretischer oder unbekannter Herkunft ohne ausreichende Grundlage dieser Gruppe zugewiesen. Dies gilt für Siegelbilder, die Greifen, 'Alerions' bzw. Oktopoden zeigen, und für einzelne andere Darstellungen, wie CMS VIII Nr. 84 sowie VII Nr. 194. Erstere trägt in der Wiedergabe des Tierkopfes und des Zweiges durchaus

Der künstlerische und technische Anspruch der Arbeiten ist in der Regel gering. Inhaltliche Zusammenhänge werden kaum dargestellt, die abgebildeten Vierfüßler sind häufig kaum identifizierbar. Der Erhaltungszustand der Siegel ist sehr unterschiedlich. Nahezu die Hälfte aller Siegel der 'Mainland Popular Group' zeigen starke Abnutzungsspuren. Etwa 22% sind weitgehend werkstattfrisch und gut 25% nur leicht berieben. Vor allem an der Peripherie sind die überlieferten Siegel häufig weitgehend werkstattfrisch und unbenutzt. Dies gilt in erster Linie für die Siegel aus Medeon in der westlichen Phokis und aus Ajios Dimitrios am Olymp. An diesen Stätten sind mehr als die Hälfte der Siegel nahezu unbenutzt. Die Stücke besitzen dort zudem sehr oft eine ausgeprägt konische Rückseite [7].

Größere stilistische Gruppierungen sind bei dieser Siegelgruppe aufgrund der geringen Zahl faßbarer Kriterien kaum zuverlässig zu bilden. In räumlich begrenzt auftretenden ornamentalen Mustern und in stilistischen Kleingruppen zeichnen sich jedoch Form- und Werkstattkreise ab, die je nach der Enge der Definition der motivischen und stilistischen Einheiten eine unterschiedliche Ausdehnung besitzen. Sie umfassen im Kern die Argolis, die Korinthia und Attika einerseits, sowie die Phokis, die Magnesia und das östliche Thessalien andererseits *(Abb. 2–3)* [8] und entsprechen so in etwa Kreisen, die in der Keramik faßbar sind [9]. Darüber hinaus können einzelne Siegelbilder der gleichen Hand oder Werkstatt zugewiesen werden. Entsprechende Stücke kamen in der Mehrheit an ein und demselben Fundort zutage *(Abb. 4)* [10].

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kretische Züge, letztere gehört eindeutig in die weiter unten beschriebene Gruppe ornamental verzierter Fluoritsiegel. Die Definition der Ornamente ist wenig präzise und durchdacht. Die Kreismotive sind weiter untergliederbar. Kreuz-, Mäander-, Swastika- und Wirbelmotive werden nicht eigens erfaßt. Die zugegebenermaßen schwierige Abgrenzung des Motivs des 8-förmigen Schildes gegenüber Kreispaaren mit großem Mittelpunkt ist nicht gelöst. CMS V Nr. 13 aus Ägina wird dem zuletzt genannten Motiv zugeordnet, die sich kaum wesentlich davon unterscheidenden Stücke CMS V Nr. 155 aus Kokolata und CMS V Nr. 574 aus Tiryns werden dagegen den 8-förmigen Schilden zugewiesen. Die Zuordnung von Siegelabdrücken aus dem Palast von Pylos (CMS I Nr. 321. 356. 369) zum Umfeld dieser Gruppe scheint mir nicht zutreffend zu sein.

7 s. u.a. CMS V Nr. 342. 345. 372. 386.

8 Die in den beiden Verbreitungskarten zusammengefaßten stilistischen und ikonographischen Gruppen beinhalten die im folgenden aufgeführten Stücke. Tierdarstellungen Gruppe 1: CMS I Nr. 138; V Nr. 512; V Suppl. 1A Nr. 405. 406. Tierdarstellungen Gruppe 2: CMS I Nr. 210; V Suppl. 1A Nr. 379. Triskelesartige Muster: CMS V Suppl. 1B Nr. 53. 436. 437. 473. Symmetrische Kreismotive: CMS I Nr. 177. 397; V Suppl. 1A Nr. 25. 26. Tierdarstellungen Gruppe 3: CMS V Nr. 394. 741. 746; V Suppl. 1A Nr. 84. 355. 356. 364. Tierdarstellungen Gruppe 4: CMS V Suppl. 1B Nr. 12. 14. Tierdarstellungen Gruppe 5: CMS V Nr. 740; V Suppl. 1A Nr. 349. Rosettenmotive: CMS V Nr. 369. 736; V Suppl. 1A Nr. 353. Triskelesartige Motive: CMS V 748; V Suppl. 1B Nr. 4; Wace – Thompson, PTh 43 Abb. 26l. Kreismotive: CMS V Nr. 330. 413. 414. Linienmotive: CMS V Nr. 398; V Suppl. 1A Nr. 361. Eine ausführliche stilistische und ikonographische Analyse dieser Siegelgruppe wird im Rahmen der Dissertation vorgelegt werden.

9 Vgl. die von E.S. Sherratt, BSA 75, 1980, 200 Abb. 10 vorgelegte Karte der Regionen, die sich aufgrund des hohen Anteils argivischer Elemente in der Keramik der Phase SH IIIB2 zusammenschließen. s. dazu auch Th.J. Papadopoulos, Mycenaean Achaia (1979) 182. Zu in der SH IIIC-zeitlichen Keramik faßbaren Kreisen s. Ch. Podzuweit in: B. Hänsel, Südosteuropa zwischen 1600 und 1000 v. Chr. (1982) 72f.

10 Derselben Hand sind vermutlich folgende Stücke zuzuweisen: CMS I Nr. 138 und CMS V Nr. 512 aus Mykene und Korakou, CMS V Nr. 3 und W. Furtwängler, Ägina. Das Heiligtum der Aphaia (1906) 432 Abb. 338 Nr. 7 aus Ägina, CMS V Nr. 228 und L.H. Sackett u.a., BSA 61, 1966, 40 Anm. 29 Nr. 3 Abb. 2c aus Chalkis und Oreoi, CMS V Suppl. 1B Nr. 178. 179 aus Monodendri, CMS V Suppl. 1B Nr. 12. 14 aus Zeli und Stavros sowie Kenna, CS Nr. 394 aus Knossos und Kenna, CS Nr. 395.

Abb. 2 Verbreitung stilistisch und ikonographisch unmittelbar verwandter Siegelbilder der 'Mainland Popular Group'.

Abb. 3 Verbreitung stilistisch und ikonographisch unmittelbar verwandter Siegelbilder der 'Mainland Popular Group'.

Abb. 4 Verbreitung werkstattgleicher Siegel der 'Mainland Popular Group'.

Aufgrund des nahezu flächendeckenden Vorkommens der Siegel, der Individualität der einzelnen Darstellungen und des dennoch oft homogenen Charakters der Siegelbilder eines Fundortes [11] ist mit einer lokalen Herstellung dieser Siegel in zahlreichen Werkstätten zu rechnen, die sich über das gesamte griechische Festland bis an die Peripherie des mykenischen Kulturgebietes hin verteilten. In der Qualität der Arbeiten besteht ein deutliches Gefälle vom Zentrum zur Peripherie hin. Dies gilt auch für kleinere Siedlungsräume, z.B. die Ebene von Argos und für den Fundplatz Mykene selbst. Die Produktionszeit dürfte im wesentlichen SH IIIA2–B umfaßt haben [12].

Abb. 5a–c a) CMS V Suppl. 1B Nr. 262; b) CMS V,1 Nr. 278; c) CMS V Suppl. 1B Nr. 225.

Abb. 6a–c a) CMS V Suppl. 1B Nr. 9; b) CMS V Suppl. 1B Nr. 446; c) CMS V Suppl. 1B Nr. 438.

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[11] Vgl. dazu insbesondere die Siegelbilder aus Medeon (CMS V Nr. 223–226. 341–419; V Suppl. 1A Nr. 84–97) und Ajios Dimitrios (CMS V Suppl. 1A Nr. 348–365).

[12] 80% der Siegel aus Fundzusammenhängen, die zeitlich bestimmt werden können, stammen aus Kontexten, die ausschließlich in SH III datieren. Kein einziges Siegel kam bislang in einem Fundkomplex zutage, der älter ist als SH IIIA2. Nur ein werkstattfrisches Siegel datiert bislang in SH IIIC (CMS V Nr. 616 aus Kladeos).

Bei der zweiten eingangs erwähnten Siegelgruppe der fortgeschrittenen Spätbronzezeit handelt es sich um ornamental verzierte Siegel aus Fluorit, die ebenfalls lentoid sind und eine konvex oder konisch gebildete Rückseite besitzen [13]. Sie treten in deutlich geringerer Zahl auf als die zuvor beschriebenen Siegel der 'Mainland Popular Group' und sind geographisch weniger breit und dicht gestreut als diese. 70 Siegel lassen sich derzeit dieser Gruppe zuweisen [14]. Sie stammen von 22 verschiedenen Fundplätzen, während die Siegel der 'Mainland Popular Goup' an immerhin 81 Fundstätten bezeugt sind. Die ornamental verzierten Fluoritsiegel kommen ganz überwiegend in Gräbern vor. Dies gilt für 76% der Siegel mit bekanntem Fundort. Nur 2% wurden dagegen in Siedlungen und 6% in Heiligtümern geborgen [15].

Die Siegel gliedern sich in zwei ikonographische Gruppen, die auch räumlich klar voneinander getrennt werden können: in eine kretische, vor allem in Armeni belegte Variante, die flächendeckend mit Doppelaxt- und Kreuz- sowie sogenannten tektonischen Motiven verziert ist *(Abb. 5)*, und in eine festländische, vor allem mittel- und nordgriechische Variante, die Rauten und z.T. zweigartige Linienmuster als Dekor trägt *(Abb. 6)*. Die festländischen Siegel sind meist in nahezu werkstattfrischem Zustand überliefert, ihre Rückseite ist überwiegend ausgeprägt konisch [16]. Die kretischen Siegel sind dagegen mehrheitlich deutlich abgerieben und benutzt. Sie besitzen in der Regel eine konvexe oder gerundet konische Rückseite, die kaum besonders ausgeprägt ist [17]. Der Dekor der Fluoritsiegel ist im Gegensatz zu den zuvor beschriebenen Siegeln fast ausnahmslos mit dem Bohrer geschnitten [18]. Anhaltspunkte für eine stilistische Ordnung der Siegelbilder bieten sich aufgrund des begrenzten Themen- und Technikrepertoires kaum.

Die begrenzte Auswahl an ausschließlich linearen Motiven, die stilistisch vergleichsweise einheitlich sind, deutet auf eine Produktion in wenigen Werkstätten hin, die auf dem griechischen Festland, nach der Verbreitung der Siegel, vor allem in Mittelgriechenland und dem südöstlichen Thessalien arbeiteten. Nur eine dieser Werkstätten ist in mehreren Beispielen stilistisch klar faßbar [19]. Die Siegel dieser Gruppe dürften hinsichtlich ihrer Entstehungzeit, ähnlich wie die 'Mainland Popular Group', vor allem in SM/SH IIIA2–B gehören [20].

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13 Die Gruppe wurde ebenfalls von Younger, Aegean Seals VI 71ff. erstmalig zusammengestellt und mit einzelnen Beispielen aufgeführt. Der Autor bezieht auch aus Serpentin oder Steatit hergestellte Siegel mit ähnlichen Ornamenten ein, wie CMS II,4 Nr. 59; I Suppl. 140. 162, die flüchtig mit der Hand graviert sind und sich stilistisch mit den anderen Stücken der Gruppe kaum vergleichen lassen. Die beiden von Younger, Aegean Seals VI 73 der Gruppe zugewiesenen Siegel aus der Sammlung de Jongs hat Boardman m.E. zu Recht als mittelbronzezeitlich angesprochen. J. Boardman in: Antichità Cretesi. Studi in Onore di Doro Levi I (CronAStorArt 12 [1973]) 121. Zum Material s. zuletzt I. Pini, CMS XI S. XVIIIf.

14 Weitere Stücke befinden sich im Archäologischen Museum von Iraklion. Sie waren mir nicht zugänglich.

15 Bei den verbleibenden Stücken (16%) handelt es sich um Einzelfunde.

16 s. u.a. CMS V Nr. 374. 375. 742–744.

17 s. u.a. CMS V Nr. 271. 277. 278.

18 Ausnahmen bilden CMS V Suppl. 1B Nr. 217 aus Armeni und CMS XI Nr. 354.

19 s. CMS V Nr. 388. 389. 744; V Suppl. 1B Nr. 8; vgl. auch CMS V Nr. 343. 737. 742. 743.

20 Die festländischen Kontexte sind kaum geschlossen. Sie umfassen in der Regel mehrere Zeitstufen, meist SH IIIA–C. Ein Siegel, CMS V Suppl. 1B Nr. 446 aus Volos/Nea Jonia wurde in einem älteren, SH II–IIIA1-zeitlichen Grab geborgen. Zwei Siegel aus Tiryns (CMS V Suppl. 1B Nr. 438) und Kladeos (CMS V

Abb. 7a–c a) CMS V Suppl. 1B Nr. 168; b) Kenna, CS Nr. 363; c) CMS V Suppl. 1B Nr. 16.

Bei der dritten eingangs erwähnten Siegelgruppe der fortgeschrittenen Spätbronzezeit handelt es sich um gepreßte Siegel aus Glas. Sie sind, wie die zuvor beschriebenen Siegelgruppen, in erster Linie auf dem griechischen Festland belegt [21] und dort vor allem in Gräbern bezeugt. Letzteres gilt für 84% der Siegel mit bekanntem Fundort [22]. Nur 4% stammen dagegen aus Siedlungen, die verbleibenden Stücke (12%) sind Einzelfunde. Die Glassiegel sind in der Mehrzahl lentoid und besitzen eine konische, häufig konkav geschwungene Rückseite [23]. Daneben, seltener und fast ausnahmslos auf der Peloponnes, treten leicht ovale Plättchen mit planparallelen Seiten auf [24]. Die Glassiegel zeigen im wesentlichen Tierdarstellungen, die sich ikonographisch und stilistisch klar von den Siegelbildern der zuvor beschriebenen Gruppen unterscheiden *(Abb. 7)*. Sie knüpfen erkennbar an ältere Bildtypen an, die vor allem auf Hartsteinsiegeln des 15.–14. Jhs. belegt sind. Auch die Glassiegel sind meist weitgehend werkstattfrisch. Sie besitzen häufig deutlich erkennbare Preßränder und Gußnähte [25]. In derselben Form hergestellte Siegel fanden sich vor allem in Medeon [26].

Nr. 617) kommen aus SH IIIC-zeitlichen Zusammenhängen. Beide Stücke sind benutzt und deutlich abgerieben. Die kretischen Siegel stammen mehrheitlich aus Komplexen, die in SM IIIA2–B2 datieren. Ein einzelnes Stück aus Armeni (CMS V Suppl. 1B Nr. 220) gehört dem Kontext nach in SM IIIA1.

21 Nur zwei gepreßte Glassiegel sind bislang aus Kreta bekannt: CMS V Suppl. 1B Nr. 239. 288 aus Armeni.

22 Von den derzeit bekannten 57 gepreßten Glassiegeln sind nur zwei Exemplare ohne Herkunftsangabe.

23 Dies gilt für 26 Glassiegel, die vor allem aus Medeon kommen. s. u.a. CMS V Nr. 349. 350. 355. 356. 360. 364. 380–382. 384. 392. 418.

24 Acht Exemplare sind bislang bekannt: CMS I Nr. 27; V Nr. 598 aus Mykene, CMS V Suppl. 1B Nr. 132. 133 aus Aj. Triada in Elis, CMS V Nr. 629; V Suppl. 1B Nr. 252 aus Chalandritsa und Voundeni in Achaia sowie CMS V Suppl. 1B Nr. 451 aus Kato Mavrolofos im südöstlichen Thessalien. Das zuletzt genannte Siegel stammt aus demselben Model wie CMS V Suppl. 1B Nr. 132. 133 aus Aj. Triada.

25 s. u.a. CMS V Nr. 381. 382. 418 aus Medeon, CMS V Suppl. 1B Nr. 170 aus Kallithea in Achaia, CMS V Suppl. 1B Nr. 1 aus Kalapodi und CMS XI Nr. 4 aus der Argolis.

26 Aus derselben Form gefertigt sind: CMS V Nr. 349. 350. 380 und 392 (Medeon); CMS V Nr. 348 und V Suppl. 1B Nr. 92 (Medeon); CMS V 2 Nr. 363 (Medeon) und V Suppl. 1B Nr. 452 (Kato Mavrolofos); CMS V Nr. 364 und 385 (Medeon); CMS V Suppl. 1B Nr. 132. 133 (Aj. Triada) und VII Nr. 137 und vermutlich V

Die gepreßten Glassiegel sind in erster Linie aufgrund des Herstellungsverfahrens und der vergleichsweise geringen Anzahl der vorhandenen Stücke stilistisch kaum sicher zu beurteilen und zu gruppieren. Dennoch zeichnet sich eine weitgehend lokale, vor allem an der Peripherie beheimatete Produktion ab. Ähnlich wie bei den Siegeln der 'Mainland Popular Group' wird in der Verbreitung stilistisch und ikonographisch verwandter Siegelbilder ein nördlicher Formen- und Werkstattkreis erkennbar [27]. Einzelne Siegel wurden nachweislich auch über größere Entfernungen transferiert [28], ob im Rahmen persönlicher Mobilität oder im Zuge anderweitigen Austausches ist beim derzeitigen Kenntnisstand kaum sicher zu entscheiden. Die Produktionszeit der Glassiegel dürfte im wesentlichen in SH IIIA2–B gelegen haben [29]. Die gepreßten Glassiegel entsprechen in den Herstellungsformen und in der Verbreitung im wesentlichen den Siegeln der 'Mainland Popular Group'. Sie ergänzen die genannte Gruppe ikonographisch um Bildthemen, die an den zentral gelegenen Fundstätten der mykenischen Kultur und in älteren Zeitabschnitten in der Regel auf Siegeln aus hartem Stein begegnen.

Für die vorgestellten Siegelgruppen können trotz der sichtbaren Unterschiede im Dekor und im verwendeten Material Gemeinsamkeiten aufgeführt werden, die im Hinblick auf die Funktion und die Bedeutung der Siegel Aussagekraft besitzen. Dazu gehören die von den großen palatialen Zentren weitgehend losgelöste Herstellung der Stücke, das häufige Vorkommen in den eher randlich gelegenen Gebieten der mykenischen Kultur, das meist kaum sichtbare Interesse an der Einmaligkeit und Unverwechselbarkeit des Dekors, und nicht zuletzt, der oft werkstattfrische Zustand der Siegel und die Unberührtheit des Intaglios auch bei deutlich abgeriebenen Stücken. Der Schluß liegt nahe, daß die vorgestellten Siegel der fortgeschrittenen Spätbronzezeit in der Regel nicht sphragistisch verwendet wurden und in ihrer Funktion oder Bedeutung nicht unmittelbar an die wirtschaftlichen und politischen Zentren gebunden waren. Die Frage nach der eigentlichen Bedeutung der nurmehr formal als Siegel

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Suppl. 1B Nr. 451 (Kato Mavrolofos); s. auch CMS V Nr. 353 und 354 (Medeon). Ein Teil der oben aufgeführten Siegel stammt nach Pini nicht aus denselben, jedoch aus sich weitgehend entsprechenden Modeln. Zur Begründung im einzelnen s. Pini, Glassiegel 66f. Nach Younger, Aegean Seals III 53 sind auch die nicht in jeder Einzelheit übereinstimmenden Siegel aus der gleichen Form gefertigt. Der Autor rechnet mit Nacharbeitungen an den gegossenen Stücken. Zu weiteren modelidentischen Siegeln s. CMS V Nr. 351 und 352 (Medeon); CMS V Nr. 360 und 383 (Medeon); CMS V Nr. 381 und 382 (Medeon); CMS XI Nr. 4 (Argos?) und V Suppl. 1B Nr. 471 (Tell Abu Hawam); CMS V Suppl. 1B Nr. 168 und 169 (Kallithea).

27 Vgl. in diesem Zusammenhang Siegelbilder mit antithetischen Löwendarstellungen aus Kalapodi (CMS V Suppl. 1B Nr. 1), Stavros (CMS V Suppl. 1B Nr. 16), Medeon (CMS V Nr. 366) und Aj. Dimitrios (CMS V Suppl. 1B Nr. 363), Siegelbilder mit einem laufenden bzw. gelagerten Vierfüßler aus Medeon (CMS V Nr. 360. 383) und Kato Mavrolofos (CMS V Suppl. 1B Nr. 450) sowie einfache Löwendarstellungen aus Medeon (CMS V Nr. 363. 385) und Mega Monasteri (CMS V Nr. 733).

28 Modelidentische Stücke sind in Aj. Triada in Achaia (CMS V Suppl. 1B Nr. 132. 133) und in Kato Mavrolofos am Golf von Volos (CMS V Suppl. 1B Nr. 451) vorhanden, ferner in Tell Abu Hawam an der Levante (CMS V Suppl. 1B Nr. 471) und in Argos (CMS XI Nr. 4) sowie in Medeon (CMS V Nr. 363) und Kato Mavrolofos (CMS V Suppl. 1B Nr. 452).

29 Dies ergibt sich in erster Linie aus der häufigen Vergesellschaftung mit Siegeln der 'Mainland Popular Group'. Die Fundzusammenhänge sind zeitlich meist nicht geschlossen. Kein einziger Komplex ist gesichert älter als SH IIIA2 und jünger als SH IIIB. Die einzigen Ausnahmen bilden zwei Lentoide aus dem Grab 12B der geometrischen Nekropole von Lefkandi (CMS V Suppl. 1B Nr. 370. 371).

Tabelle 1 Grabausstattung von Komplexen, die Siegel der 'Mainland Popular Group' beinhalten.

Fundort	Keramik	Idole	Stein-/Tonwirteln	Schmuck/Trachtbestandteile															"Mainland Popular Group"-Siegel						Waffen			Geräte/pers. Ausstattung							Waage							Fragmente						Gefäße				Datierung
				Tonperlen	Steinperlen	Glasperlen	Fayenceperlen	Elfenbeinperlen	Bronzering	Bernsteinperlen	Goldperlen	Silberring	Goldring	Knochen	Muschel	Gold/Silber	Nadel	Fibel		Fluoritsiegel	Glassiegel	Hartsteinsiegel	Ring	andere Siegel	Pfeilspitze	Lanzenspitze	Schwert	Messer	Bronzegerät	Knochengerät	Rasiermesser	Pinzette	Kamm	Spiegel		Elfenbeinscheibe	Knauf	Niete/Nietkopf	silber-goldplattierter Nietkopf	Bleidraht	Bleigewicht	Knochen	Elfenbein	Fayence	Stein	Bronze	silber-/goldplattierte Bronze	Gold	Eberzahn	Bronze	Silber	Elfenbein	Stein	
Skoura/Kivouria, Kistengrab	●																		1																																			SH IIIA-B
Chora/Englianos, Grab E9	●																		1																																			SH IIIB
Athen, Agora, Grab 7	●																		1																																			SH IIIC
Voula-Glyphada, Grab D	●		●																1																																			SH IIIA1-C
Mykene, Grab 505	●	●																	1																																			SH IIIA2
Voula-Glyphada, Grab C	●	●	●																1																																			SH IIIA1-B
Prosymna/Yerogalero, Grab 11	●		●														●		1																																			SH IIIA1-2
Prosymna/Yerogalero, Grab 6	●		●			●													1																																			SH IIIA2-B
Prosymna/Yerogalero, Grab 46	●	●	●																1									●																										SH IIA-IIIA1
Kallithea/Rambandania, Grab D	●				●				●										1										●																									SH IIIA1-C
Zeli/Aj. Georgios, Grab 1	●		●		●														2																																			SH IIB-IIIB1
Rachmani, Tholosgrab	●		●			●													2																																			SH IIIB
Prosymna/Yerogalero, Grab 8	●		●		●	●													2																																			SH IIIA2
Kokolata/Kangelises, Tholosgrab B	●		●			●													4																																			SH IIIA(?)-C
Kalapodi/Vagia, Grab 1	●		●																1		1																																	SH IIIA2-B
Chalkis/Trypa, Grab 8	●		●																1	1																																		SH I-IIIA
Mega Monasteri/Kara Dere, Grab E	●		●			●													1	1																																		SH IIIB
Medeon/Aj. Theodoros, Grab 99	●	●																	3	2																																		SH IIB-IIIB
Salamis/Stadt, Grab	●																		1			1																																	SH IIIB-C
Varkisa/Kamini, Grab 3	●	●				●													1			1																																SH IIIA2-B
Kato Mavrolofos, Grab	●		●	●	●	●													6	4	1																																	SH IIIA1-B
Medeon/Aj. Theodoros, Grab 239	●	●				●			●										12	1	1			2																														SH IIIA1-C Mitte
Kallithea/Rambandania, Grab M	●		●		●	●	●												1							●																												SH IIIA1-C
Metaxata/Chalikera, Tholosgrab B	●				●	●													5									●																										SH IIIB-C spät
Mykene/Kalkani, Grab 523	●		●			●			●										1			1														●																		SH IIIA2
Kallithea/Rambandania, Grab O	●		●		●	●	●		●								●	●	2							●																												SH IIIA1-C
Prosymna/Yerogalero, Grab 34	●		●			●											●		1						●			●																										SH IIA-IIIA2
Aj. Ilias/Panajia, Grab	●		●			●													1					1				●			●																							SH IIB-IIIA2
Monodendri/Stenosia, Grab 1	●				●	●	●												4					2				●																	●									SH IIIA2-B
Argos/Deiras, Grab 24	●		●		●												●		1									●		●			●	●		●																		SH IIIA2
Prosymna/Yerogalero, Grab 38	●	●	●		●	●								●	●				1						●			●			●															●								SH IIIB
Medeon/Aj. Theodoros, Grab 162	●		●			●					●								1																																			SH IIIC
Naxos/Kamini, Grab 3	●				●						●						●		1																																			SH IIIC
Salamis, Grab					●	●									●	●			1																																			?
Tiryns/Profitis Ilias, Grab 19	●		●		●	●					●								1					1																													SH I-IIIA2
Medeon/Aj. Theodoros, Grab 29a	●	●	●			●					●								5	6	3																																	SH IIIA2-submyk.
Mykene/Asprochoma, Grab 8	●				●	●			●		●					●		●	1			2																																SH IIIB-C
Mega Monasteri/Kara Dere, Grab G	●				●	●		●			●					●			1	3		1	1	1															●														SH IIIA2-B1
Aj. Ilias/Marathia, Tholosgrab	●				●	●			●		●								1									●	●																			●						SH IIIB-C spät
Karpofora/Akones, Tholosgrab	●		●						●				●						1			2											●						●															SH I/II, IIIA-B
Rafina/Perati, Grab 1	●		●		●	●	●				●	●	●	●					1			2	2					●																						●			SH IIIC früh-Mitte
Chora/Englianos, Grab K2	●										●								1						●																									●				SH IIIB2-C Mitte
Medeon/Aj. Theodoros, Grab 29	●	●					●		●										18	3	17	1	1			●																							●				SH IIIA1-C Mitte
Pteleos/Gritsa, Tholosgrab	●	●	●				●		●		●								1		3							●																●									SH IIIA1-C, klass.
Mykene, Kyklop. Tholosgrab	●		●			●					●								1						●																		●					●						MH, SH I/II-III, histor.
Tigani/Heraion, Kistengrab	●		●		●							●							1																	●		●																SH IIIA
Oxylithos/Evrima, Tholosgrab	●		●		●	●													1									●											●													●		SH IIIA1-B
Kokolata/Kangelises, Tholosgrab A	●		●		●	●	●						●						3						●			●																										SH IIIA-C
Mega Monasteri/Kara Dere, Grab D	●	●	●			●							●						2	1	2				●				●		●								●				●											SH IIIA2-B1
Kokolata/Kangelises, Grubengräber			●		●	●					●								10				1		●			●	●																●								SH IIIA-C
Aj. Theodori/Metaphio, Tholosgrab	●		●									●							4				1					●																						●				SH IIIA2
Aj. Ilias/Seremeti, Tholosgrab	●	●	●		●	●					●								3	1				1	●	●										●												●				SH IIIA1-C

Tabelle 2 Grabausstattung von SH IIIA2–C-zeitlichen Komplexen mit Siegeln aus hartem Stein und Ringen aus Edelmetall.

| Fundort | Keramik | Idole | Stein-/Tonwirteln | Schmuck/Trachtbestandteile | | |

anzusprechenden Objekte ist naheliegend. Die Fundzusammenhänge können trotz forschungsgeschichtlich bedingter und in den Bestattungssitten begründeter Schwierigkeiten Anhaltspunkte für entsprechende Überlegungen bieten [30]. Dies gilt vor allem für die 'Mainland Popular Group', die bislang als einzige der genannten Gruppen in sehr großer Zahl überliefert ist.

Der Besitz von formal als Siegel anzusprechenden Objekten war in der fortgeschrittenen Spätbronzezeit auf dem griechischen Festland weit verbreitet. Siegel sind in allen Grabformen bezeugt und in Gräbern mit unterschiedlichen Ausstattungen belegt. Sie kommen in diesen Komplexen allein, wie auch mit weiteren Siegeln vergesellschaftet vor. In der geographischen Verbreitung der Siegel und in ihrer Verteilung auf die verschiedenen Ausstattungsgruppen mykenischer Gräber zeichnen sich jedoch Unterschiede zwischen den Siegeln der 'Mainland Popular Group', den gepreßten Glassiegeln und den ornamental verzierten Fluoritsiegeln einerseits sowie den Stücken aus hartem Stein, den geschnittenen Glassiegeln, den Edelmetallringen und vielen importierten Siegeln andererseits ab *(Tabelle 1. 2)* [31].

Siegel aus weichem Stein sind mehrheitlich in Fundzusammenhängen belegt, die nicht überdurchschnittlich reich mit Schmuck und Beigaben ausgestattet sind. Sie kommen vor allem in der Argolis und in Attika in den weniger gut ausgestatteten Gräbern vor. An der nördlichen und nordwestlichen Peripherie sowie an einzelnen, nicht zentral gelegenen Plätzen Messeniens und Euböas finden sie sich dagegen in Gräbern mit einem verhältnismäßig reichen Inventar *(Tabelle 1)*. In den monumentalen Tholosgräbern und in architektonisch ungewöhnlichen Kammergräbern fehlen diese Siegel ebenso wie in Komplexen mit einer besonderen Ausstattungsqualität. Die vor allem in den Zentrallandschaften der mykenischen Kultur bezeugten Siegel aus hartem Stein oder Edelmetall sind überwiegend in gut, verhältnismäßig reich sowie hervorragend ausgestatteten Gräbern belegt. Sie fanden sich — häufig in zahlreichen Exemplaren — in den monumentalen Tholosgräbern der Argolis, Attikas und Messeniens. An der nördlichen und nordwestlichen Peripherie kamen sie in den Komplexen zutage, in denen sich, meist in größerer Zahl, auch Siegel aus weichem Stein und gepreßtem Glas befanden *(Tabelle 2)*.

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30 Zu diesen Schwierigkeiten s. zusammenfassend W.G. Cavanagh — Ch. Mee in: Hägg – Nordquist, Celebrations 56.

31 Die Grundlage für die beiden Tabellen bilden festländische Gräber, die in SH IIIA2–C datieren und Siegel beinhalteten. Ältere Komplexe sind nur dann einbezogen, wenn sie ein spätes Siegel aus weichem Stein oder gepreßtem Glas enthielten. Ordnendes Kriterium für die Kombinationstabellen war das Vorhandensein von Objekten besonderer Qualität, die sich aus dem Material – u.a. Elfenbein, Silber und Gold – und der Art der Gegenstände – u.a. Waffen, Luxusgegenstände und -gefäße – ergibt. Die Grabzusammenhänge konnten aufgrund der Überlieferungslage nur als Ganzes betrachtet werden. Das Vorgehen ist grundsätzlich methodisch problematisch. Die Quellenlage bietet jedoch kaum eine andere Möglichkeit. Cavanagh und Mee kamen in ihren Untersuchungen, die die gesamte Spätbronzezeit umfassen, bezüglich der Gruppierung der Gräber auf dem Wege der Klusteranalyse zu ähnlichen Ergebnissen. s. dazu W.G. Cavanagh, Aegaeum 1, 1987, 161ff.; W.G. Cavanagh – Ch. Mee in: Hägg – Nordquist, Celebrations 55ff.; dies., OxfJA 3, 1984, 45ff. Die in den Tabellen angegebenen Datierungen weichen z.T. von den in der Literatur zitierten Zeitangaben ab. Sie gehen auf briefliche Informationen P.A. Mountjoys zurück.

In der Deponierung der Siegel zeichnen sich regionale Unterschiede ab, die in erster Linie in Verbindung mit der zentralen oder peripheren Lage der Fundstätte bzw. der Fundlandschaft zu stehen scheinen. Siegel der 'Mainland Popular Group' kommen in der Argolis, in Attika, Böotien, Messenien und Elis überwiegend in der Einzahl und kaum mit Siegeln anderer Art vergesellschaftet vor *(Tabelle 3)* [32]. In der westlichen Phokis, im südöstlichen Thessalien und in Ätolien fanden sich Siegel der genannten Gruppe dagegen in der Regel in der Mehrzahl und zusammen mit Siegeln aus Fluorit, Glas oder hartem Stein *(Tabelle 4)*. Die Zugehörigkeit von mehreren Siegeln zu einer einzigen Bestattung ist dort gelegentlich nachgewiesen [33].

Eine Übersicht über die Verteilung der Siegel innerhalb eines Gräberfeldes ist, forschungsgeschichtlich bedingt, nur selten möglich. In den Nekropolen von Mykene, Tiryns und Prosymna sind jeweils mehrere Siegel vorhanden, Siegel aus weichem Stein wie auch aus hartem Stein oder Edelmetall. Auch innerhalb dieser Nekropolen scheint eine Beziehung zwischen der Art der gefundenen Siegel und der Qualität der Inventare zu bestehen. Neben Grabanlagen, die Siegel beinhalteten, fanden sich jeweils mehrere Gräber ohne entsprechende Funde, die die gleiche oder auch eine höhere Ausstattungsqualität besaßen. In Prosymna verteilen sich die mykenischen Siegel auf die verschiedenen Gräbergruppen, in denen sich jeweils nur ein Siegel befunden zu haben scheint [34].

Die wenigen vorhandenen Siedlungsfunde bieten nur bedingt weitere Informationen. Es handelt sich ausnahmslos um Verlustfunde, die sich häufig in Wohn- und Werkstattbereichen oder auch kultisch genutzten Räumlichkeiten in der unmittelbaren Umgebung der Paläste fanden [35]. Siegel der 'Mainland Popular Group' sind zudem in kleineren und größeren Siedlungen wie Korakou [36], Zygouries [37], Koukounara/ Paläochorio [38] und Nichoria [39] belegt.

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32 In der vorliegenden Abbildung werden exemplarisch die Verhältnisse in der Argolis und in Böotien vorgelegt.

33 Dies gilt für folgende Komplexe: Chrison (Krisa)/Prosphyjika, Grab 1 Bestattung A (CMS V Nr. 319. 324. 331. 333), Grab 2 Bestattung B (CMS V Nr. 323. 335), Grab 3 Bestattung F (CMS V Nr. 326–328), Rachmani, Tholosgrab (Wace — Thompson, PTh 43 Abb. 26k–l). Medeon/Ajios Theodori, Grab 239 Kinderbestattung (mehrere Siegel). In den Gräbern 29 und 29a des genannten Fundortes überstieg die Anzahl der Siegel die Zahl der identifizierten Bestattungen.

34 Dies gilt bei einer engen Interpretation der Kluster. Zum Plan des Gräberfeldes und den verschiedenen Gräbergruppen s. C.W. Blegen, Prosymna. The Late Helladic Settlement Preceeding the Argive Heraion (1937) 152ff. 173ff. Plan 1.

35 Zu entsprechenden Funden aus Mykene s. CMS I Nr. 166; G.E. Mylonas, Prakt 1974, 90f. Ein Plastilinabdruck, der vermutlich zu dem an der zuletzt genannten Stelle beschriebenen Siegel gehört, befindet sich im CMS in Marburg. Zu entsprechenden Funden aus Tiryns s. CMS V Suppl. 1B Nr. 432. 433. 436. 437. 442. 441, aus Pylos s. CMS I Nr. 297 sowie aus Theben s. CMS V Nr. 670.

36 s. CMS V Nr. 512. Die Fundumstände dieses Siegels sind nicht bekannt. Da in Korakou jedoch keine Gräber der fortgeschrittenen Spätbronzezeit (SH IIIA–C) bekannt sind, handelt es sich vermutlich um einen Fund aus der Siedlungsgrabung.

37 s. C.W. Blegen, Zygouries. A Prehistoric Settlement in the Valley of Cleonai (1928) 38. 207 Abb. 198,4. Die Fundsituation des Stückes ist nicht exakt beschrieben. Das Siegel fand sich in der Verfüllung des sog. 'drain trap' oberhalb des 'Potter's Shop'. In wieweit sie dem Zerstörungshorizont des Gebäudes zuzuordnen oder jünger als dieser anzusetzen ist, bleibt unklar. s. ebenda 38. 205. 206f. E. French, BSA 66, 1971, 125 Anm. 43.

38 s. CMS V Suppl. 1B Nr. 188.

39 s. CMS V Nr. 442. 443–445. 447.

Tabelle 3 Vergesellschaftung von Siegeln der 'Mainland Popular Group' mit anderen Siegeln in den Gräbern der Argolis und Böotiens.

Die Abkürzungen werden wie folgt aufgelöst: MP = Siegel der 'Mainland Popular Group', F = Fluoritsiegel, G = Glassiegel, HS = Siegel aus hartem Stein, R = Ringe, AS = andere Siegel (es handelt sich meist um Mitanni-Siegel des Common Style).

Fundort	Fundstelle	MP	G	F	HS	AS	R	Datierung
Argolis								
Argos/Deiras	Grab 24	1						SH IIIA2
Mykene/Kalkani	Grab 505	1						SH IIIA2
Mykene/Asprochoma	Grab 8	1			2			SH IIIB2–C
Mykene/Kalkani	Grab 523	1						SH IIIA2
Mykene	Kyklop. Tholos	1						?
Prosymna/Yerogalero	Grab 6	1						SH IIIA2–B
Prosymna/Yerogalero	Grab 8	2						SH IIIA2
Prosymna/Yerogalero	Grab 11	1						SH IIIA(1)–2
Prosymna/Yerogalero	Grab 34	1						SH IIA–IIIA2
Prosymna/Yerogalero	Grab 38	1						SH IIIA2–B?
Prosymna/Yerogalero	Grab 46	1						SH IIA–IIIA1
Tiryns/Profitis Ilias	Grab 19	1				1		SH IIIA2 spät
Aj. Vasilios/Zygouries	Grab 33	1						SH IIIB
Böotien								
Kallithea/Pyrgari	Grab 1	1						SH IIB–IIIB, 5.–6. Jh. v. Chr.
Tanagra/Dendron	Grab 13	1						SH IIIA2
Tanagra/Dendron	Grab 34	1						SH IIIA1–B
Tanagra/Dendron	Grab 18	1						SH IIIA1–B
Tanagra/Ledesa	Grab 23	1						SH IIIA–C1

Tabelle 4 Vergesellschaftung von Siegeln der 'Mainland Popular Group' mit anderen Siegeln in den Gräbern der westlichen Phokis, des südöstlichen Thessaliens und Ätoliens.

Die Abkürzungen werden wie folgt aufgelöst: MP = Siegel der 'Mainland Popular Group', F = Fluoritsiegel, G = Glassiegel, HS = Siegel aus hartem Stein, R = Ringe, AS = andere Siegel (es handelt sich meist um Mitanni-Siegel des Common Style).

Fundort	Fundstelle	MP	G	F	HS	AS	R	Datierung
westl. Phokis								
Chrison/Prosphyjika	Grab 1	3			1			SH IIIB
Chrison/Prosphyjika	Grab 2	3			1			SH IIIC
Chrison/Prosphyjika	Grab 3	6			1			SH IIIC
Medeon/Aj. Theodoros	Grab 29	18	17	3	1		1	SH IIIA1 –C Mitte
Medeon/Aj. Theodoros	Grab 29a	5	6	3				SH IIIA2 –submyk.
Medeon/Aj. Theodoros	Grab 99	3	2					SH IIB–IIIB
Medeon/Aj. Theodoros	Grab 239	12	1	1		2		SH IIIA1 –C spät
Medeon/Aj. Theodoros	Grab 264	3	1			1		SH IIIA2 –C spät
Medeon/Aj.Theodoros	Grab 162	1						SH IIIB
südöstl. Thessalien								
Aj. Theodori/Metaphio	Tholosgrab	4			1			SH IIIA2
Kato Mavrolofos	Grab	6	4	1				SH IIIA1–B
Pteleos/Gritsa	Tholosgrab	1		3				SH IIIA1–C, klassisch
Stavros/Bikiorema	Grab 5	3	1		2	1		SH IIB/IIIA1 -submyk.
Mega Monasteri/Kara Dere	Grab G	1	3		1	1	1	SH IIIA2–B1
Mega Monasteri/Kara Dere	Grab D	2	1	2				SH IIIA2–B1
Mega Monasteri/Kara Dere	Grab E	1	1					SH IIIB

Fundort	Fundstelle	MP	G	F	HS	AS	R	Datierung
Ätolien								
Aj. Ilias/Marathia	Tholosgrab 2	1				1		SH IIIB–C spät
Aj. Ilias/Seremeti	Tholosgrab	3		1	1			SH IIIA1–C
Aj. Ilias/Panajia	Kammergrab	1				1		SH IIB–IIA2

Die Interpretation der geschilderten archäologischen Situation ist aufgrund der fragmentarischen Überlieferung der bronzezeitlichen Denkmäler Griechenlands [40] und der begrenzten Kenntnisse über Beschaffenheit und Gliederung der mykenischen Gesellschaft schwierig [41]. Anhaltspunkte für Überlegungen bieten sich jedoch in den oben beschriebenen Phänomenen. Die späten Siegel aus weichem Stein und gepreßtem Glas wurden im Gegensatz zu den Siegeln aus hartem Stein und Ringen aus Edelmetall in der Regel nicht sphragistisch verwendet. Nach dem verarbeiteten Rohstoff und der aufgewendeten Arbeitszeit besaßen sie darüber hinaus wohl kaum einen besonderen materiellen Wert. Sie waren in großer Zahl vorhanden, verglichen mit anderen Denkmälergruppen – z.B. Schmuck – in ihrem Vorkommen jedoch begrenzt. In der Deponierung der Stücke zeichnen sich Regelhaftigkeiten ab, die regional unterschiedlich sind. Vor allem in den zentralen Landschaften der mykenischen Kultur ergeben sich kaum Überschneidungen mit den qualitätvollen, sphragistisch verwendeten Stücken aus hartem Stein und Edelmetall.

Die späten mykenischen Siegel aus weichem Stein und gepreßtem Glas spiegeln so einen Personenkreis wider, der sich in Rang und Status deutlich von den Besitzern von Siegeln aus hartem Stein und Ringen aus Edelmetall unterscheidet [42]. Die Inhaber von sphragistisch verwendeten Stücken lassen sich einer Gruppe von Personen zuordnen, die Kontrolle über wirtschaftliche und administrative Vorgänge ausübte [43] und in ihrer sozialen Stellung deutlich

[40] Nur ein Bruchteil des ursprünglich vorhandenen Sachgutes ist archäologisch überhaupt erfaßt. Es dürften kaum mehr als 10% der tatsächlich angelegten bronzezeitlichen Gräber bekannt sein. I. Pini geht für die Siegel dieser Zeit davon aus, daß der erhaltene Bestand maximal 5% der eigentlichen Produktionsmenge ausmacht.

[41] Die Kenntnisse beruhen auf archäologischen und schriftlichen Zeugnissen, die Einblicke in die Administration der Paläste und die Organisation der Gesellschaft bieten. Bei der Bewertung der archäologischen Denkmäler sind die Verzerrungen zu berücksichtigen, die durch den regional unterschiedlichen Forschungs- und Publikationsstand sowie die Deponierungssitten im Bestattungswesen entstehen, die trotz der mykenischen 'koine' in SH IIIB großräumig uneinheitlich gewesen sein dürften. Die Linear B-Texte liefern ein Bild über die Verhältnisse im Reich von Pylos. In wieweit diese unmittelbar und im einzelnen auch auf andere Landschaftsräume und Paläste zu übertragen sind, ist unklar. Zu Unterschieden in der Administration der Paläste von Knossos und Pylos s. J.P. Olivier in: C.W. Shelmerdine – Th.G. Palaima (Hrsg.), Pylos comes alive. Industry and Administration in a Mycenaean Palace (1984) 11ff.

[42] Rang und Status zeigen sich in der Grabausstattung wie auch im Besitz von sphragistisch verwendeten Siegeln. Vgl. dazu I. Kilian-Dirlmeier, JbZMusMainz 34, 1987, 209 Abb. 9.

[43] Grundsätzlich ist mit der Möglichkeit zu rechnen, daß Siegel als Rang- und Statussymbol innerhalb eines bestimmten sozialen Milieus oder Umfeldes weitergegeben wurden.

hervorgehoben war. Sie dürfte in unmittelbarer Verbindung mit der zentralen Verwaltung in den Palästen gestanden haben [44] und eine herrschaftliche Elite gebildet haben, in deren Händen sich Ämter und Funktionen in unterschiedlichem Maße konzentrierten [45]. Macht- oder Funktionsbereiche und 'statusrelevante Beschäftigungen' spiegeln sich nach den Überlegungen I. Kilian-Dirlmeiers und R. Laffineurs in den Siegelbildern wieder [46], die neben friedlichen Darstellungen von Haustieren, Kampf- und Jagdszenen, Löwendarstellungen und kultische Szenen zeigen. Löwendarstellungen und Tierkampfszenen werden im allgemeinen als Sinnbilder für Stärke und als Symbole politischer Macht aufgefaßt. Haus- und Herdentiere nehmen vermutlich Bezug auf Haus- und Grundbesitz oder Viehzucht. Kultische Szenen gehören in den religiösen Bereich [47].

Die späten mykenischen Siegel aus weichem Stein sind in ihrer Bedeutung weniger klar zu umschreiben, da ihre primäre Funktion, anders als bei den zuvor beschriebenen Siegelgruppen, archäologisch nicht faßbar ist. Sie sind wohl ebenfalls einem begrenzten Personenkreis zuzuordnen, der sich in den zentralen Landschaften der mykenischen Kultur durch bestimmte Funktionen oder einen besonderen Status auszeichnete [48]. Es mag sich um Personen gehandelt haben, die mit den Belangen der kleineren räumlichen Einheiten befaßt waren, die die Interessen des Palastes auf untergeordneter Ebene berührten. Die Siegelbilder, soweit sie thematisch einzuordnen sind, gehören bis auf wenige Ausnahmen in den Bereich der 'economic iconography' [49].

An der Peripherie ist aufgrund des veränderten Vorkommens der Siegel mit einem Funktions- und Bedeutungswandel zu rechnen. Die Vergesellschaftung der verschiedenen, auch qualitativ unterschiedlichen Siegel miteinander und ihr Vorkommen in verhältnismäßig reich ausgestatteten Gräbern deuten darauf hin, daß diese Siegel einer lokalen Oberschicht zuzuweisen sind, die in Verbindung mit den palatialen Zentren stand und sich in Lebensstil sowie

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44 Der Siegelabdruck garantierte vermutlich, in Analogie zu Tonbullae in Anatolien aus der Zeit der assyrischen Kolonie, den Inhalt von Warensendungen beim Transport. Das Siegel befand sich also in den Händen des Lieferanten bzw. eines Vertreters des Palastes am Auslieferungsort. Letzeres wird durch eine gegengezeichnete Tonplombe aus dem Palast von Pylos nahegelegt. Die Schriftzüge gehen auf einen Schreiber zurück, der aus den Tontafeln des Palastes von Pylos bereits bekannt ist. s. dazu Kilian-Dirlmeier a.O. (Anm. 42) 209 mit Verweisen.

45 Ebenda 210.

46 Ebenda 207f. R. Laffineur, Aegaeum 6, 1991, 117ff. Die Zuordnung der Bildthemen zu den verschiedenen Bereichen ist überzeugend. Im einzelnen ergeben sich jedoch vor allem bei den weniger qualitätvollen Siegeln aus weichem Stein Schwierigkeiten. Die Darstellungen sind häufig verkürzt und daher nicht immer sicher lesbar. Die Bedeutung von Motiven und Füllelementen, die einen symbolischen Wert besitzen können, wie 8-förmige Schilde und frontal wiedergegebene Rinderköpfe, ist kaum zuverlässig zu beurteilen. Auch die zahlreichen ornamentalen Muster lassen sich nicht einordnen. Laffineur verzichtet daher auch auf die Einbeziehung der zuletzt genannten Motivgruppe in seine Untersuchung.

47 s. u.a. Kilian-Dirlmeier a.O. (Anm. 42) 208. Laffineur a.O. 154 faßt die verschiedenen Bildthemen unter den Begriffen 'ruler iconography', 'cultual iconography' und 'economic iconography' zusammen.

48 Cavanagh – Mee a.O. 61 (Anm. 30) weisen die verschiedenen Gräbergruppen der Nekropole von Prosymna Familienverbänden zu, wobei sie nicht ausschließen, daß sich in diesen gleichzeitig lockere politische Allianzen widerspiegeln. In den verschiedenen Gräbergruppen fand sich jeweils ein Siegel.

49 CMS V Nr. 361 aus Medeon zeigt dagegen einen Löwenüberfall, CMS V Suppl. 1A Nr. 6 vermutlich eine Stierspringerszene, CMS V Nr. 228 aus Chalkis vielleicht einen laufenden Löwen.

Repräsentationsmitteln an diesen orientierte [50]. Inwieweit sich das Ausüben politischer und wirtschaftlicher Macht nach den gleichen Regeln vollzog und in ähnlichen Formen ausdrückte, bleibt weitgehend ungeklärt. Eine herrschaftliche Ikonographie ist in diesen Gebieten vor allem auf gepreßten Glassiegeln bezeugt, die selbst nicht mehr sphragistisch verwendet wurden [51]. Die größere Zahl der beigegebenen Siegel in den Randgebieten mag die hier stärker empfundene Notwendigkeit widerspiegeln, die eigene Stellung nach außen darzustellen und zu repräsentieren.

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[50] Zur Existenz eines von der zentralen Administration unabhängigen, lokalen Adels s. K. Wundsam, Die politische und soziale Struktur in den mykenischen Residenzen nach den Linear B-Texten (1968) 111ff.

[51] s. CMS V Nr. 353. 354. 363. 364. 366. 385 aus Medeon, CMS V Nr. 733 aus Mega Monasteri, CMS V Suppl. 1A Nr. 363 aus Aj. Dimitrios am Olymp, CMS V Suppl. 1B Nr. 1 aus Kalapodi, CMS V Suppl. 1B Nr. 16 aus Stavros bei Lamia und CMS V Suppl. 1B Nr. 132. 133 aus Aj. Triada in Achaia, CMS V Suppl. 1B Nr. 451 aus Kato Mavrolofos in der Ebene von Almiros. s. auch CMS I Nr. 100 aus Mykene, CMS V Suppl. 1B Nr. 239 aus Armeni und CMS V Suppl. 1B Nr. 370. 371 aus einem geometrischen Grab in Lefkandi.

CHANGE AND CONTINUITY IN THE MM: THE TOMB OF KAMILARI

ENRICA FIANDRA

The tomb 1 of Kamilari, as is well-known, [1] was plundered in ancient times and, consequently, the layer of stones, which had fallen from the vault and was found at the moment of opening, did not seal in the state of things at the time of the last burial, but rather the situation left by the robbers. The door was still closed by a large stone slab, but the central keystone placed at the apex of the vault to ensure its stability was not found inside the tholos among the stones of the roofing which had fallen there, but rather outside it. This showed that the robbers had entered the tomb from above, and it is this fact which consequently caused the collapse of the whole vault, perhaps after a long time, although it is not possible to measure the interval between the removal of the keystone and the final collapse.

The total lack of precious objects, apart from a few grains of gold which had evidently escaped the notice of the violators, proves that the position of the materials was disarranged during the plundering of the tomb, although the groups of vessels do not seem to have been moved very much; rather they reveal signs of having been searched and, as a result, also broken, in the hunt for precious goods.

It is not possible, therefore, to determine with certainty the criterion used for the collocation of the burial material. However by carefully examining the position of groups of homogeneous vessels it would seem that, as more remains and material were added, the zone between the entrance and the central area was gradually cleared by moving the bones and material from the previous burial towards the perimeter of the tholos. In addition, the stylistic sequence and, to a certain extent, also the stratigraphic sequence of the ceramics, permit us to fix the date of its construction in MM IB and to establish that it was definitively abandoned in LM. Between these two periods the tomb was in constant use.

The finding of objects which can be dated from the early periods MM IB and MM IIA bear witness to this fact; for example: the small jug *à la barbotine* F 2927 [2] and the small jar

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* Translated by D. Bland.

The figures, not in scale, intend to stress the comparison between seal motifs.

Source of illustrations: *Fig. 4e:* Evans, PM I 674 Fig. 493a; *Fig. 5b:* Evans, PM I 565 Fig. 411d; *Fig. 5c:* Evans, PM I 565 Fig. 411c; *Fig. 6b:* Evans, PM I 673 Fig. 492e; *Fig. 6d:* Evans, PM I 673 Fig. 492d. (All drawings by the author).

1 Levi, ASAtene 23/23, 1961/62, 7ff.

2 Levi (supra n. 1) Fig. 114g.

F 3070, [3] both of which were found in the enclosure for offerings, and the large number of small stone vessels, typical of the 2nd Palace Period at Phaistos, which were found both in and outside the tholos together with many ceramic remains from MM IIA. The last period in which the tholos was used is dated by the LM jars found around the door area which was subsequently occupied definitively by two sarcophagi of painted terra-cotta.

In between the two extremes of these dates we have, as I have already said, an uninterrupted sequence of use to which the ceramics from MM IIB and MM III bear witness. The latter, which are particularly abundant and homogeneous, were found in every part of the tomb.

I do not wish to linger on an examination of the ceramics, as the detailed publication by Doro Levi deals with the argument exhaustively. I merely wish to point out that, unlike his classification of the ceramics at Phaistos where he includes ceramics from both MM IIB and MM III in the so-called Phase III, when Levi speaks of Palace Phase III in the tomb of Kamilari, only production from MM III should be understood. With this awareness the reading becomes clear and the text convincing.

We also have confirmation of the constant use of the tomb of Kamilari in the more specific field of glyptics. In fact, numerous seals belonging to the deceased were found together with the offerings and household objects.

Unfortunately, we no longer have a sure connection between seal and burial furniture, both because of the practice of moving the older burial material to make room for the new, and because of the plundering of the tomb. This fact prevents us from dating each single seal by means of the excavation data; we can try, however, to date the seals by means of stylistic comparisons starting from the given fact that they were present in every period, in parallel with the ceramics.

Levi has also suggested a general chronological classification for this category of objects which is but, on the whole, correct. So I will limit myself to a review of the seals found in the tomb of Kamilari while making some illustrative comparisons, in the conviction, as I have already said, that, in the almost total absence of chronological-topographical data, a stylistic analysis of the material is of great help in its dating.

The nineteen seals found in the tomb can be chronologically attributed thus:

1. One seal to early protopalatial phases.
2. One cylindrical seal, widespread in every period.
3. Seven seals to MM IIB.
4. Six seals between MM IIB and MM III.
5. Four to LM.

Let us look at them now group by group:

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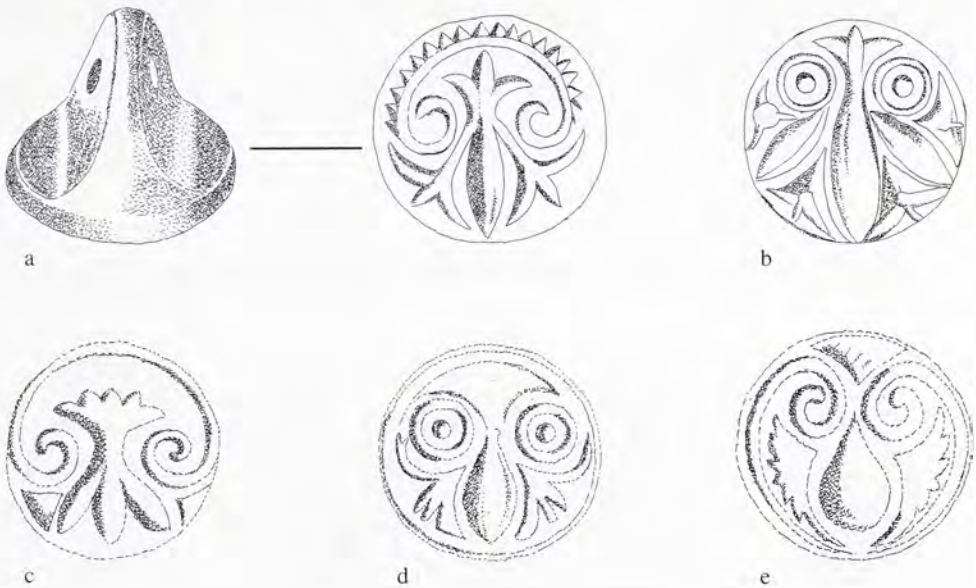
[3] Levi (supra n. 1) Fig. 114a.b.

a b

Fig. 1a.b a) Kamilari F. 2959; b) Kamilari F. 2652.



a b c d e

Fig. 2a–e a) Kamilari F. 2956; b) Phaistos C. 1896; c) Phaistos, Room VIII; d) Phaistos No. 968; e) Phaistos No. 971.

1. Levi attributes seal F 2959 *(Fig. 1a)* to the initial part of the period MM because of its simple, schematic composition, although its simplicity of execution could be due to lack of ability on the part of a mediocre craftsman.

2. The cylindrical seal F 2652 *(Fig. 1b)* bearing a very simple motif of small, slanting ladders, reveals a connection with the oriental cylindrical seals which were widespread in every period.

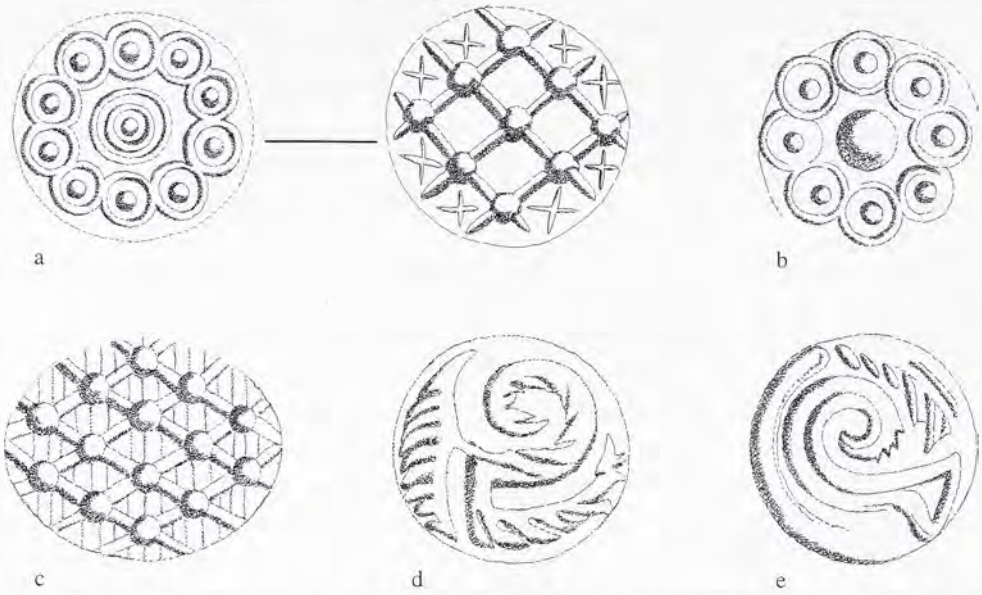


Fig. 3a–e a) Kamilari F. 2643; b) Phaistos No. 668; c) Phaistos No. 848; d) Kamilari F. 2958; e) Phaistos No. 739.

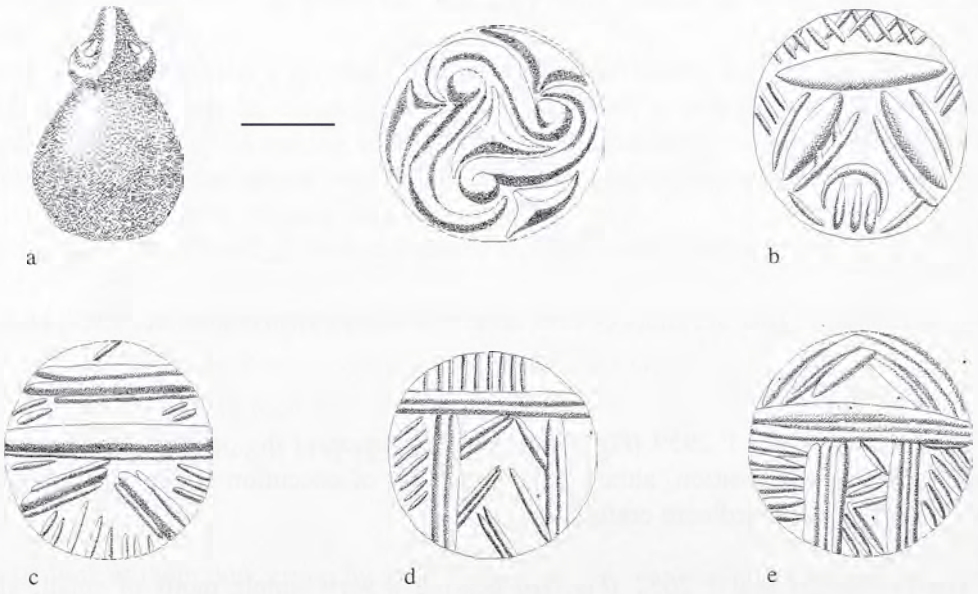


Fig. 4a–e a) Kamilari F. 2645; b) Kamilari F. 2646; c) Kamilari F. 3096; d) Kamilari F. 2647; e) Knossos.

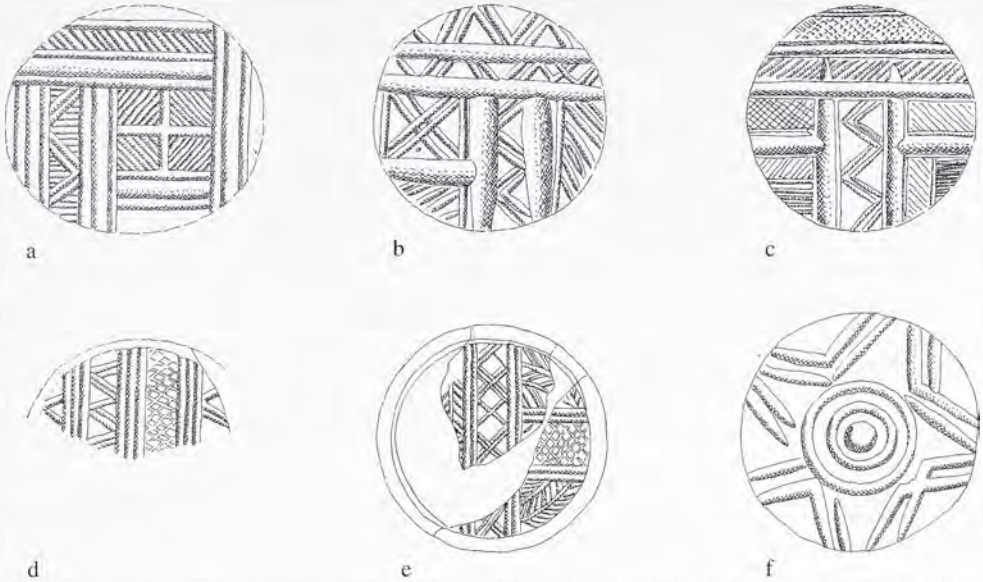


Fig. 5a–f a) Kamilari F. 2651; b) Knossos; c) Knossos; d) Phaistos No. 839; e) Phaistos No. 963; f) Kamilari F. 2641.

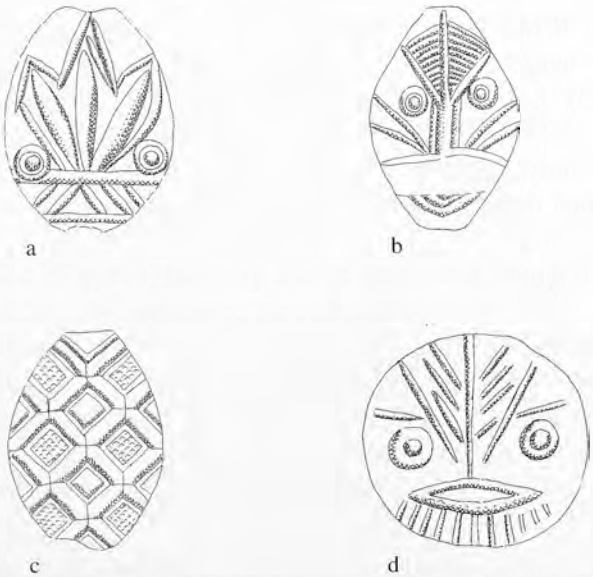


Fig. 6a–d a) Kamilari F. 2642; b) Knossos; c) Kamilari F. 2644; d) Knossos.

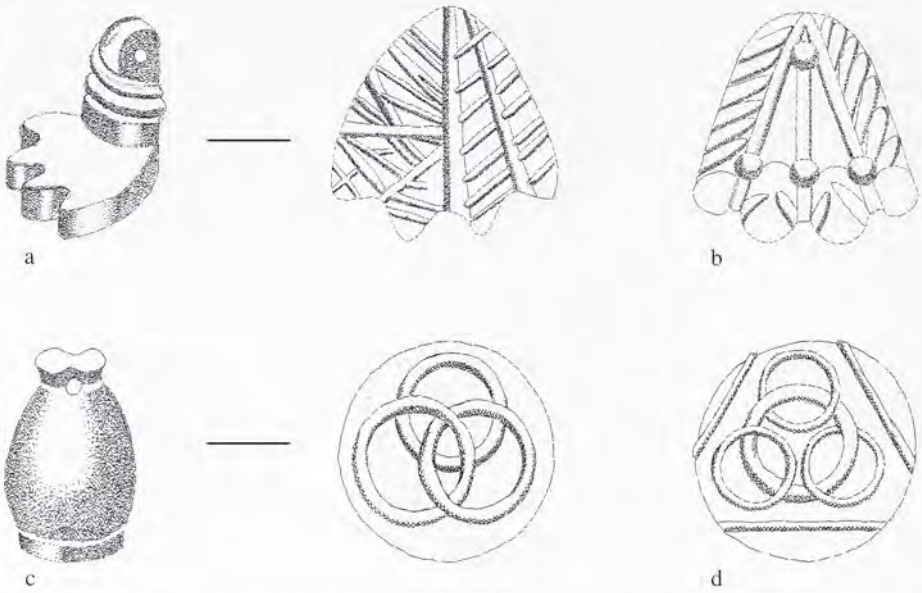


Fig. 7a–d a) Kamilari F. 2640; b) Phaistos No. 798; c) Kamilari F. 2639; d) Phaistos No. 773.

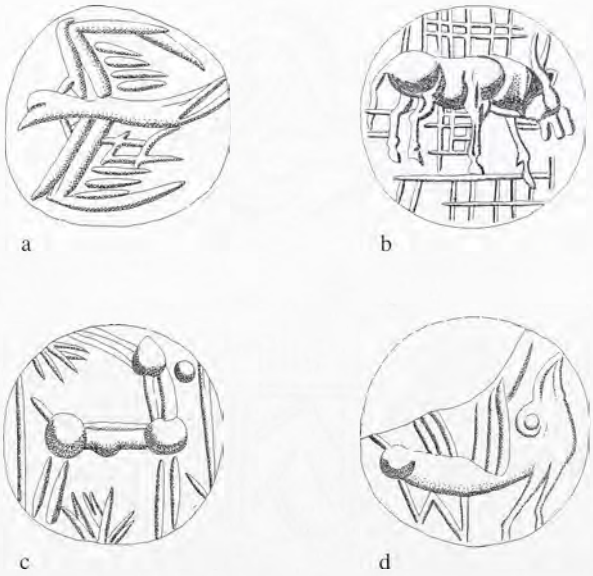


Fig. 8a–d a) Kamilari F. 2648; b) Kamilari F. 2649; c) Kamilari F. 2650; d) Kamilari F. 2955.

3. The seven seals which can be attributed to MM IIB are:

– the button-shaped seal F 2956 *(Fig. 2a)* which should be compared stylistically to the seal C 1896 *(Fig. 2b)*, the seal impressions found at Phaistos in Room VIII *(Fig. 2c)* and in Room 25: Nos. 968 *(Fig. 2d)*, 971 *(Fig. 2e)*.

– seal F 2643 *(Fig. 3a)*, with two faces showing motifs which are very similar to the seal impressions found on several sealings in Room 25 at Phaistos, the one to inventory Nos. 668 (CMS II,5 No. 60) *(Fig. 3b)* and 818 (CMS II,5 No. 58), and the other to No. 848 (CMS II,5 No. 12) *(Fig. 3c)*. The same can be said for seal F 2958 *(Fig. 3d)* which is not very different from No. 739 (CMS II,5 No. 182) at Phaistos *(Fig. 3e)*, even if the motif is inverted.

– seal F 2645 *(Fig. 4a)* which for its Catherine-wheel design, resembles analogous motifs at Phaistos.

– seals F 2646. 2647. 3096 *(Fig. 4b.d.c)* which, with their elementary composition, can be compared to analogous examples at Knossos *(Fig. 4e)*.

4. Four of the six seals which can be dated between MM IIB and MM III were found in room β. In particular, stone vessels typical of MM IIA were found in corner N-E, together with fragments of ceramic vessels with impressions in imitation of metal, all from this same period.

However, a fairly certain dating can be hypothesized for at least four seals (F 2640. 2641. 2642. 2651) which were, in fact, found under the group of vessels from MM III including the amphora F 2723.

Seal F 2651 *(Fig. 5a)*, in particular, can be placed between MM II and MM III, being comparable to several seals from the area of Knossos *(Fig. 5b.c)* and to seals Nos. 800 (CMS II,5 No. 243), 839 (CMS II,5 No. 244) *(Fig. 5d)* and 963 (CMS II,5 No. 242) *(Fig. 5e)* at Phaistos; similarly seal F 2641 *(Fig. 5f)*.

Seal F 2642 *(Fig. 6a)*, which seems to me more characterized from a stylistic point of view, can be attributed to MM III and compared with two seals which come from the area of Knossos *(Fig. 6b.d)*.

I would put seal F 2644 *(Fig. 6c)*, the only one in this group which does not come from room β, beside seal F 2642 simply because of its outline shape.

Finally, there are two other seals which belong to this group: seal F 2640 *(Fig. 7a)* with the bird's foot motif which is widespread in MM III and even later – although its outline shape gives us a comparison with the seal impression from Room 25 No. 798 (CMS II,5 No. 42) *(Fig. 7b)* – and seal F 2639 *(Fig. 7c)* which was found on the threshold between β and γ and resembles the central part of No. 773 at Phaistos *(Fig. 7d)*.

5. Seals F 2648. 2649. 2650. 2955 can be dated to LM. In particular, F 2648 *(Fig. 8a)* seems to me to belong to the series with bird from Haghia Triada because of its motif and the type of incision.

The seals found in the tomb of Kamilari confirm the custom of burying the dead together with their own seals, a custom well-known both in Crete, in every period, and in the Orient; and this fact attests the personal, juridical value of the seal. The question of the length of time over which the seal was used, which in general should not exceed the period between the moment in which the individual acquires the right to use the seal and that in which he loses this right due to his juridical unworthiness or to his death, is undoubtedly one which needs further investigation. It would also be interesting to investigate if and in what situation a seal could be passed on to heirs or to other individuals, either indicated by the owner or, anyway, with the right to use it. This would justify the presence of seals which are stylistically more ancient in more recent contexts.

The brief analysis of the seals made above was indispensable to confirm the results also obtained from an examination of the ceramics, namely that there was a continuity of use in the tomb of Kamilari across the various periods which is more evident than in the dwellings and in the palace at Phaistos, where there are noticeable pauses in time caused by natural or accidental disasters such as earthquakes and fires. Thus it is that the successive reconstruction after every event or the new settlements still in the same place bear witness to the continuity of life in the area of the palaces. Whereas, in the tholos tomb the continuity of use is so linear as to give no suspicion of the revolutionary changes in construction and decoration which took place in the palaces between one period and another, as in the passage between the end of the Early Palaces (MM IIB), MM III with its scattered settlements, and the beginning of the Second Palaces.

The tomb of Kamilari confirms that all the more consistent changes — structural, artistic and administrative — did not influence in any way the carrying out of the various activities, including funerary activities, which continued uninterrupted through even the most radical events and changes.

Also as regards the custom of fixing seals on lumps of clay, the change which occurs between MM IIB and MM III is undeniable and quite revolutionary: from sealings on objects to sealings on tie-strings. But, despite this, the seals continued to have an analogous juridical-administrative value in both periods. I mentioned sealings hanging from strings, like those of Haghia Triada, meaning strings hanging from documents and not from objects. The only sealing of this type found at Phaistos in Room 10 supports us in this hypothesis. In fact, the lump of clay was laid against a papyrus before the word *su-ki-ri-ta* was inscribed on it. The impression of the papyrus is not functional, in fact the sealing is not of the type which is pressed on a document, but of the type which hangs from the document itself, a custom which became common and which has lasted until recent times. Probably the operation of writing and setting the seal occurred at the same time as the papyrus document from which the sealing was to hang was being handled, and this document was inadvertently allowed to touch the wet clay.

In conclusion, despite the lack of stratigraphic data, it is possible to observe that the tomb of Kamilari was in constant use from the period of the Early Palace to that of the Second Palace. This leads to the supposition, and it is this which interests us, that even the most

dramatic events, which caused a temporary interruption in the life of the palaces, were overcome without traumas or the abandonment of sites, in a continuing bent towards more and more improved technological and administrative systems.

IDENTICAL SEALS ON ROUNDELS AND OTHER DOCUMENTS

ERIK HALLAGER

True to my tradition, I start with further additions and corrections to the corpus of roundels: [1] First and foremost is the addition of two new uninscribed roundels from Samothrace presented by Matsas at the 1992 Cretological Congress, of which one has so far been published. [2] Next, an inscribed roundel from Knossos *(KN Wc 48)* was discovered among the KN-sealings. [3] We should delete the doubtful *PH Wc <47>* from the corpus of roundels: although listed by Carratelli among the 'cretule', there is no mention of any seal impression [4] and Levi explicitly states that the 'document' is a "Fr. vaso con segno inciso". [5] On the other hand, we may add at Phaistos three uninscribed roundels (of which two are complete): *PH Wc 49* (HM 692α), *PH Wc 50* (HM 820) and *PH Wc 51* (HM 927). [6] Another complete roundel in the Heraklion Museum, without any known provenance, may tentatively be designated *CR Wc 1*. [7] At Hagia Triada, *HT Wc 3021* (HM Bk) is not a roundel, [8] but more probably a direct sealing comparable to Fiandra's type M or possibly type O; [9] *HT Wc 3013* (HM 71) does not bear Levi's seal type 40 [10] but seal type 50. [11] At Khania,

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* I wish to thank Judith Weingarten for correcting the English text and for her valuable comments on this paper. Source of illustrations: Fig. 4: J. Boeltoft. Remaining photographs and drawings are stated by the author. Since the CMS does not use bold script, references to insriptions are given in italics.

1 Some corrections were presented by E. Hallager in: CMS Beih. 3, introductory note and 77, addendum, and id. in: ASSA 121f. Pl. XXI.

2 D. Matsas, Studia Troica 1, 1991, 159ff.; id. "Η μινωική παρουσία στο ΒΑ Αιγαίο κατα την μέσι χαλκοκρατεία. Στοιχεία απο Σαμοθράκη," presented at the 7th International Cretological Congress at Rethymnon, August 1991.

3 E. Hallager – J. Weingarten, BSA 87, 1992, 177ff.

4 G. Pugliese Carratelli, ASAtene 35/36, 1957/58, 378.

5 D. Levi, Festòs e la civiltà minoica (1976) 810 (F 239). The fragment is now probably in the Heraklion Museum, cf. id., 770.

6 These roundels were Class R in Fiandra's typology (E. Fiandra in: Pepragmena 2, 383ff.), a category which contained only roundels and noduli.

7 I am most grateful to Dr. Kritsas for permission to mention this roundel.

8 Godart – Olivier, GORILA 2, 78.

9 HT 'Wc' 3021 has at the bottom imprints from a smooth surface ground in a right angle; from box?, stone vase?. On the inside close to the outer surface possible remains from a string. On surface turning away from rim, fragment from the impression of probably a lentoid where two legs from an animal is preserved. On the surface 'above' rim one slightly bent incision (or could it be imprint from long nail as is often seen on the Phaistos direct sealings in addition to the seal impressions)? H 1.7; W 1.7; Th 0.55 cm.

10 Printing error in D. Levi, ASAtene 8/9, 1925/26, 82, repeated in J. Raison – M. Pope, Corpus transnuméré du linéaire A (1980) 133 and Godart – Olivier, GORILA 2, XL.

KH Wa 1021 and *KH Wa 1025* are not fragments of hanging nodules [12] but are roundel fragments. [13] *KH Wa 1021* should be joined, in all probability, to the fragmentary roundel (with KH 5) *KH Wc 2087*; [14] *Wa 1025* is probably a fragment from yet another roundel with KH 28. [15]

For the topic under discussion, these corrections add one example of similar seals on roundels and other documents: CMS II,5 No. 272 (*PH Wc 49* [HM 692a]), while dropping two examples: HT 40 (Wc 3013) = HT 50; KH 28 (which does now not occur on nodules). We are thus left with eight certain and one probable examples (the one from Phaistos is open to question) where identical seals were impressed on roundels and on other documents.

At MM II Phaistos, the seal CMS II,5 No. 272 on HM 692 *(Fig. 10)* is found on an uninscribed roundel *(PH Wc 49)* and on a sealing of Fiandra's type M. [16] The sealing, of brick red finely gritted clay, had been pressed against an edge and a second 'surface'; the single seal impression was on the surface otherwise entirely filled with finger prints. The almost-complete impression is well preserved. [17] We thus have evidence for a recipient of goods (although, as the roundel was uninscribed, we do not know what product) who was also responsible for securing goods (type M). This suggests that the seal user may have belonged within the administration.

A second example from MM II Phaistos is the seal CMS II,5 No. 97 *(Fig. 10)*: one can make a fairly good case for this seal appearing on the roundel *PH Wc 41* as well as on an incompletely-preserved sealing of Fiandra's type D (HM 858). [18] The sealing, of rather light porous clay, had sealed a cylindrical peg tied by a cord at the bottom; on its surface were four partial seal impressions. All visible details of these seal impressions seem to match the impression on the roundel *(Fig. 1)* but the latter impression is 8–10% larger than the impression on the sealing. This, however, may be explained by the baking of their very different clay-fabrics (the roundel is of a solid clay, the sealing of a rather porous clay) which may have caused a slight reduction of the original size. If accepted as the same seal, this roundel-recipient of wine apparently also had the authority to seal doors or chests within the palace. As with HM 692, the user of the roundel again appears connected with the local palace administration.

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11 Levi (supra n. 10) 99.

12 Papapostolou, Sphragismata 166f.

13 I have discussed these two fragments with Judith Weingarten, who agrees with me that they are not fragments from nodules.

14 This fragment has same clay, colour, burning, way of fracturing, same reading (horizontally) as *2087* to which it shall tentatively be ascribed.

15 The fragment – which is read horizontally – did not fit the missing part of *2055*. Neither could it possibly fit *2059, 2090, 2091* nor *2090* since those two roundels are read vertically.

16 Fiandra (supra n. 6) 389 Fig. PNE'.

17 Good photographs of the seal impressions are found in CMS II,5 No. 272: Top is from the sealing and bottom is from *Wc 49*.

18 Fiandra (supra n. 6) 388 Fig. PMA'.

Fig. 1 Left: Seal on HM 1530 (PH Wc 41); right: HM 858 (sealing type M). Scale 2:1.

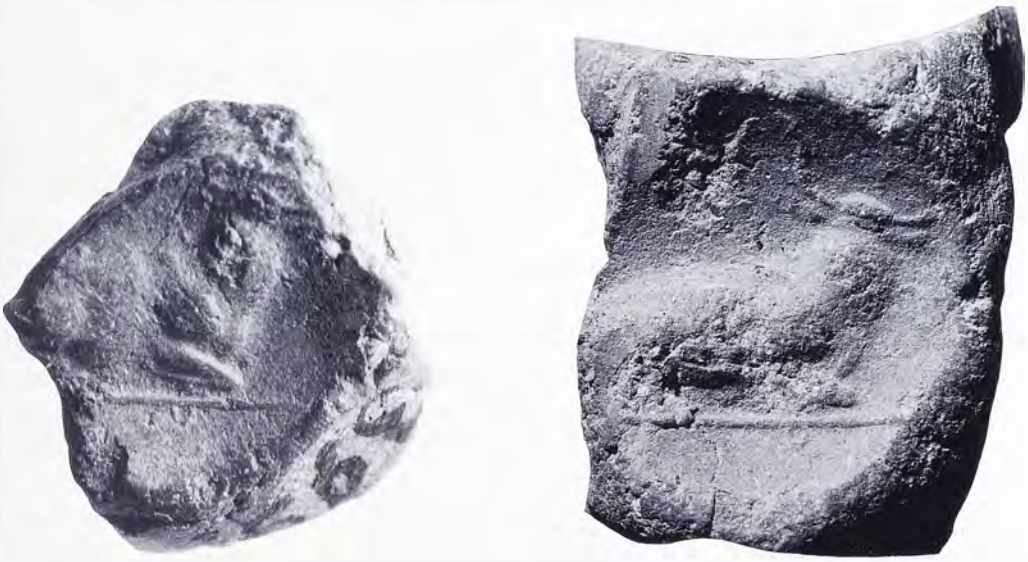

Fig. 2 Left: KN-Rl on HM 399; right: KN-Rl on HM 345 (KN Wc 30). Scale 4:1.

At the MM III Temple Repositories at Knossos, it has been suggested that the seal impression on *KN Wc 29* (KN-Rc) might be the same or similar to the impressions found on two parcel nodules (HM 349. 398) of Class V from the Temple Repositories; likewise it has been suggested that seal KN-Rk on *KN Wc 40* is the same or similar to two other parcel nodules (HM 384,1–2) from the Temple Repositories with Evans's motif 'trees in the

wind'. [19] However, in both cases, it can be positively stated that the seals on the roundels and nodules are not identical and (in my opinion) cannot even be considered as 'look-alikes'.

This leaves us with one example of the use of same seal on different documents at Knossos: Seal KN-Rl *(Fig. 10)* found on a roundel *(KN Wc 30)* and on a sealing (HM 399) of Class Pseudo-IV (incompletely preserved). [20] HM 399 bear impressions of two different seals: the couchant ox of KN-Rl and an architectural design. On *Fig. 2* left, is seal Rl on HM 399, and right on the roundel. The small, thin half-circle below the horizontal line proves both impressions to have come from the same seal. [21] If correctly interpreted as some kind of parcel nodule (the imprint from the object sealed is missing) we have here a case of a person receiving goods (the roundel) who also had the authority (or obligation) to seal documents.

LM IB Hagia Triada supplies three examples of the same seal appearing on roundels and other sealed documents: HT 79. 112. 125.

1. HT 79 *(Fig. 10)* is found on a roundel *(HT Wc 3022)* and on 42 nodules [22] *(Fig. 3)* apparently all of Class XI. All but one of the nodules are inscribed with one of five Linear A signs/symbols: AB 77, KA (11 times); AB 81, KU (5 times); AB 02, RO (8 times); AB 41, SI (12 times); and AB 04, TE (5 times).

Both the large number of nodules (4% of the total at Hagia Triada) and their spread across several activities (5 different signs) suggest that HT 79 is one of the elite (Group I) administrative seals in use at Hagia Triada. [23] The hanging nodules shed no further light on his responsibilities or activities, but the inscribed roundel *Wc 3022* may indicate some involvement with personnel (AB 100/102).

2. HT 112 *(Fig. 10)* is found on three roundels plus a triangular prismatic clay bar and a hanging nodule. [24]

The prismatic clay bar *(Fig. 4)* cannot now be traced; it was described by Levi as a "Sbarra prismatica di argilla, con la triplice impronta nn. 20, 47 e 112, su una delle tre facce lunghe; nell'altra v'è l'iscrizione, mentre la terza è liscia". [25] The inscription on this bar is similar to those of roundels *(Fig. 10)*. [26] No dimensions nor descriptions of clay or of finger-

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19 J. Weingarten in: Transition 42 n. 13 and appendices 1 and 2.

20 Weingarten (supra n. 19) 42. 50.

21 Already noted by Gill, KSPI 70 (L 27), Weingarten (supra n. 19) 42 n. 14, and I. Pini in: ASSA 53, and Pl. VIIe.f.

22 *HT Wc 3022* and HM 455–458, Firenze 94757 (incised with TE) and 94758 (incised with RO), Pigorini 71961–71963. Levi (supra n. 10) 109. Weingarten (based on GORILA 2) enumerates 41 inscribed nodules although only 37 are listed in her table 4, all type VII. Weingarten, SSMC I 286 Table 2; 288 Table 4. The discrepancy is due to the fact that only 37 specimens are in the Heraklion Museum; the rest are in the Pigorini Museum and Firenze Museum.

23 Weingarten (supra n. 22) 284ff.

24 *HT Wc 3016. 3017. 3024, HT Wa <1021 bis>* and HM 587.

25 Levi (supra n. 10) 83 Fig. 25 Pl. IX.

26 Identical to the inscriptions found on the 'reverse' of two roundels stamped by seal 112: *HT Wc 3016. 3017.*

Fig. 3 HM 455/10 with HT 79. Scale 2:1.

Fig. 4 HT Wa <1021>, composite drawing based on D. Levi, ASAtene 8/9, 1925/26: photograph (Pl. IX) and drawings (Figs. 46, 68 and 128).

Fig. 5 HM 587 with HT 112 (uninscribed). Scale 2:1.

prints is given. HT 20 is stated to be impressed once [27] while HT 47 is wrongly stated to be impressed twice. [28]

What is noteworthy is that HT 112 appears together with two other seals on a unique document: this is the only document from Hagia Triada with three different seal impressions and the only document described as a clay bar.

If, as stated by Levi, the bar had not sealed anything, it might best be compared to a type of nodulus. In that case, the seals would probably have been those of the administration since it only — in my opinion — makes sense for administrators to issue dockets (as interpreted by

27 Levi (supra n. 10) 91 Fig. 46.
28 Levi (supra n. 10) 98 Fig. 69.

Weingarten [29]). However, we could also compare the bar to two roundels from Mallia *(MA Wc 13–14)* each stamped by two ordinary, apparently non-administrative seals. [30] A detail which makes its identification as a kind of roundel tempting is that the clay bar has three seal impressions and its ideogram is followed by the number '*3*'; in other words, this may be the same system as on roundels. There is no way of knowing whether or not the three seal impressions were made by the same person. [31]

The last document, with HT 112, is a well-preserved hanging nodule of Class VII (HM 587) *(Fig. 5)*. Clear finger prints are visible on two sides, with a single impression of HT 112 on the third side. The nodule is uninscribed.

HT 112 who acknowledged the receipt of CYP *(Wc 3016. 3017)* and sheep *(Wc 3024)* on roundels [32] apparently may also be connected to the administration through the use of his seal on a hanging nodule. Whether or not he was also 'issuing' CYP (if *Wa <1021 bis>* is understood as a nodulus) must for the moment remain uncertain.

3. HT 125 *(Fig. 10)* is found on a single roundel and on 255 hanging nodules. [33] Of the hanging nodules, 248 are inscribed with signs in Linear A: AB 77, KA (57 times); AB 81, KU (42 times); AB 02, RO (31 times); AB 41, SI (49 times), A 301 (14 times); AB 74, ZE (7 times); AB 28, I (20 times); and AB 59, TA (11 times) or with combinations of signs: AB 01–77, DA-KA (5 times); AB 28–76, I-WE (7 times); AB 41–77, SI-KA (4 times); and AB 28–A 301 (1 time). [34] The clay of the nodules varies greatly in appearance, from badly burnt light slightly porous to very hard black burnt pieces; by far the most common, however, is a red finely gritted, relatively well baked clay. The height of the nodules vary from 1.7 to 2.6 cm with corresponding variations in diameter. All of these nodules were made in a surprisingly homogeneous manner: first of all, the clay is always pressed around a cord tied with a big knot. Then, the seal impression always shows the man in front upside down. The triangular piece of clay was then turned left (in a vertical position) and inscribed on side B. Side C, now slightly curved, was left untouched. There are only a very few exceptions to this rule.

If the number of impressions and the number of Linear A signs used – single or in combination – is significant for the importance of the seal-user we are here most definitely dealing with the top administrative leader at Hagia Triada, as shown by Weingarten, [35] he was furthermore – as his colleague HT 112 – seen to be a recipient of CYP.

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29 J. Weingarten, Kadmos 25, 1986, 1ff., and ead., Kadmos 29 (1990), 16ff.

30 E. Hallager – J. Weingarten, BCH 117, 1993, 1ff.

31 It is obvious from one of the Samothrace nodules *(SA Wa 1)*, that one person could have had more than one seal in a string – and secondly we have both two- and three-sided gems. In the forthcoming E. Hallager, The Minoan Roundel (Proceedings of the Danish Institute in Athens, Monographs 1) it is, however, argued that the impressions were done by three people.

32 E. Hallager – L. Godart – J.-P. Olivier, BCH 113, 1989, 431ff.

33 *HT Wc 3015* and 252 nodules HM 141–151. 538. 557, Firenze 94761 (incised with KA). 94762 (incised with KU), Pigorini 71950–71955.

34 Weingarten (supra n. 22) 28 Table 2.

35 Weingarten (supra n. 22) 283–285.

At Hagia Triada we have thus three examples of identical seals used on roundels and other sealed documents. There are some grounds for arguing that the user of HT 112 was himself an administrator, and this is most definitely the case with the users of seals HT 79 and HT 125, two leaders within the central administration.

At LM IB Khania there are again three examples of identical seal-use on different types of documents: KH 5, KH 20 and KH 26.

Fig. 6a–b Two hanging nodules with KH 5 (KH Wa 1019, left and KH Wa 1020, right)
a) Face A with seal impressions; b) Face B with inscription. Scale 2:1.

1. KH 5 *(Fig. 10)* (CMS V Suppl. 1A No. 162) is found on four roundels as well as two hanging nodules of Class VII *(Fig. 6)*.[36] *Wa 1019* is completely preserved while *Wa 1020* is fragmentary. On the A side, both bear a single impression:[37] on 1019 the motif is impressed along the length axis of the nodule while on 1020 the motif is upside down compared to the hanging position. When the two nodules are turned left, we find on side B the inscriptions, probably the same on both, although the sign is not immediately recognizable in the corpus of Linear A.[38] Turning the nodules left once more, sides C are blank.

So, although the seals are impressed in a different manner on the nodules, they probably both have the same inscription. On roundels, KH 5 dealt with the so-called ship-ideogram (A 566) on *KH Wc 2062*. The fact that KH 5 is also found on nodules of Class VII probably places him within the central administration.

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36 *KH Wc 2056. 2057. 2062. 2087* and *KH Wa 1019. 1020.*

37 Papapostolou, Sphragismata 46ff. Pls. 16f.

38 GORILA 5, 318 suggests the fractional sign 704 E as an uncertain possibility.

Fig. 7a Eight hanging nodules with KH 20 (KH Wa 1005–1012). Face A with seal impressions. Scale 2:1.

Fig. 7b Eight hanging nodules with KH 20 (KH Wa 1005–1012). Face B with inscriptions. Scale 2:1.

2. KH 20 *(Fig. 10)* (CMS V Suppl. 1A No. 169) is found on eight roundels and eight hanging nodules of Class VII *(Fig. 7)*. [39] All nodules were impressed with the seal on Side A along the length axis of the nodule, although not always in the same direction. When the nodules are turned left, this B-side is inscribed: on *Wa 1005–1010* we find the ZE sign (AB 74), all incised upside down compared to hanging nodule, and on *Wa 1011–1012* the sign A 301 is incised across the side of the nodule.

In Weingarten's terminology, KH 20 would be an elite administrator of Group II (i.e. connected to the signs ZE and A 301). [40] What is being administrated by those signs is unknown, but KH 20 seems to have received units of a textile (AB 164) on the roundels. If AB 164 is correctly interpreted, his roundels acknowledged receipt of at least 19 units of this textile product. [41]

Fig. 8a–b Two flatbased nodules with KH 26 (KH Wa 1536–1537)
a) Face with seal impressions; b) reverse with string marks. Scale 2:1.

3. KH 26 *(Fig. 10)* (CMS V Suppl. 1A No. 174) is found on one roundel and two parcel nodules of Class IV and V *(Fig. 8)*. [42] The seal is in both cases impressed in the same direction compared to the stringmarks on the reverse. It is interesting that the clay of nodule 1537 is of a type not normally used for LM IB sealings but rather is definitely the same as the famous Local Kydonian pottery workshop clay. [43]

While KH 5 and KH 20 were found on hanging nodules, KH 26 is found on parcel nodules, indicating that the user had the authority (or obligation) to seal written documents. In connection with the discussion whether or not some parcel nodules may actually have

39 *KH Wc 2036–2042. 2111* and *KH Wa 1005–1012*.
40 Weingarten (supra n. 22) 285.
41 Hallager (supra n. 1) 142 Table 8.
42 *KH Wc 2060* and *KH Wa 1536. 1537*.
43 Y. Tzedakis, BCH 93, 1969, 396ff.

'travelled' from where they were made,[44] it is noteworthy that *Wa 1537* is of local clay, probably showing that the seal-user worked within the local administration. The ideogram on the roundel sealed by KH 26 is incomplete; it may be the same 'ship-ideogram' (A 566)[45] that was also inscribed on a roundel stamped by KH 5.

In total, there are nine examples where the same seal was used on roundels and on other sealed documents. Thus, of 74 different seal devices on roundels, ca. 12% are also found on nodules. On the other hand, of more than 866 different seal devices on sealings, less than 1% also appeared on roundels *(Table 1)*. Though few, these nine examples do reveal some positive information *(Fig. 9)*:

1. We note that such overlaps persist throughout the entire history of roundels, i.e. from MM II Phaistos, at MM III Knossos to LM IB Hagia Triada and Khania.

2. Overlaps are not confined to any particular site.

3. Most important, these help answer the question: who was obliged to give roundel-receipts within the administration? I think it very reasonable to accept Weingarten's identification of Hagia Triada HT 125 and HT 79 and Khania KH 20 as elite administrators working within the local administration. Since HT 26 at Khania had sealed using a local clay, he too may be considered as a local administrator. If Fiandra's sealing type D had sealed a door rather than a portable chest, we could also argue with confidence that the same applies to Seal 858 from Phaistos. We cannot be certain about the remaining three examples but I see no reason why their sealings should not equally be products of local administration.

In six of the nine cases at least, we can be certain that roundels were stamped by people already otherwise employed in local administration, and that these people were obliged to acknowledge the receipt of items/goods from the administration through the medium of roundels.

In LM IB, this covers most of Weingarten's types of administrators:

1. those authorized to seal documents (KH 26)

2. those connected with "Group II administrators" (KH 20)

3. those connected with "Group I administrators"(HT 79)

4. the overall elite administrator (HT 125)

The only group missing are those who were authorized to seal noduli, an omission perhaps due to chance given the relatively small number of noduli.

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44 J. Weingarten in: N.H. Gale (ed.), Bronze Age Trade in the Mediterranean. Papers Presented at the Conference held at Oxford in December 1989, SIMA 90 (1991) 303ff.

45 Also Godart – Olivier, GORILA 5, 271.

	Seal	Roundel	Sealing document Class I-V	Sealing Goods or documents Class VI-X	Other
PH MM II	692	—			Type M
	858				Type D
KN MM III	R1		Pseudo Class IV		
HT LM IB	79				
	112			1 uninscribed	prismatic bar
	125		Class IV		
KH LM IB	5				
	20				
	26		Class IV class V		

Fig. 9 Table showing information concerning roundels and other documents with use of identical seals: Col 1: site and date; Col 2: Seal number as used in this paper; Col 3: The roundels and their inscriptions; Col 4: Parcel nodules; Col 5: hanging nodules with indication of inscriptions; Col 6: Types under Phaistos are those of Fiandra (supra n. 6).

What products did these administrators receive from the storerooms *(Fig. 9)*?

- It seems to be wine at Phaistos;
- at Knossos we cannot tell;
- at Haghia Triada HT 112 and HT 125 both receive cyperus while HT 112 also receives sheep;
- at Khania we can only be reasonably sure that KH 20 received some kind of textiles.

The results are not in themselves impressive, but do allow us to raise some further questions: may we, for example, learn that Group I administrators were connected to certain commodities, while Group II were connected to others? Also, were the inscriptions on roundels sealed by HT 112 and HT 125 (KA-KU-RO-SI respectively) connected to the inscriptions found on the hanging nodules of Class VI–VII?

As it is, the evidence is too sparce to allow more than speculation. Nonetheless, we have seen that even elite administrators had obligations to the administration; even the most active elite administrator (HT 125) at Haghia Triada was obliged to give receipts.

Some seal-user's are more active on roundels than others. I call the most active the 'main-roundel-users' [46]; curiously, these are not found also stamped on sealings.

Just four seal-users accounted for for 44% of the total number of roundels: KH 13. 22. 11 (CMS V Suppl. 1A No. 163. 158. 156) from Khania (representing more than half the roundels from the site) and HT 31 from Hagia Triada (almost 60% of the HT roundels) *(Table 2)*. Why were they not also found on nodules from the same site?

Two possible explanations may be offered: One explanation is, of course, pure chance. On Table 1, we compare the number of roundels with all other sealed documents; there is no consistency as to their relative frequency, varying from 0.2% at Zakro and Phaistos to 56% at Khania. Where we have many sealings/nodules there are few roundels, and where there are many roundels the proportion of sealing/nodules is relatively small. Given this situation, simple chance cannot be ruled out.

On the other hand, if roundels acknowledged receipts from the administration, we would expect people at all levels within the bureaucracy to have given such receipts each time he or she got something out of a storeroom. If, for example, le chef de cuisine, gave a roundel-receipt every time he got two units of (for example) olive oil, he might appear very frequently on the roundels but, at the same time, he need not have the authority (or obligation) to seal documents or minor valuable goods. In my opinion, it is therefore not necessarily surprising that we do not find the main-roundel-users among the nodules: they are more probably large-consumers, not administrators having the task or the responsiblity of themselves sealing nodules.

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[46] My definition of a 'main-roundel-user': 1) those sealing at least five roundels and at least 10% of the number of roundels from the site; 2) the number of roundels at that site must consist equal at least 10% of the total corpus of roundels. These criteria leaves only the sites Hagia Triada and Khania with 'main-roundel-users'.

Table 1

	Number of seal types			Number of documents		
	R	N/S	Com	R	N/S	%
GO	1	5	0	1	14	7
HT	7	150	3	22	1081	2
KE	1	0	0	1	0	100
KH	21	31	3	118	91	56
KN	19	86+	1	14	111+	11
MA	5	1+	0	5	1+	?
PH	9	326	2	11	6500	0.2
PYR	3	1	0	2	1	67
SA	5	3	0	2	3	40
TY	2	3+	0	2	3+	?
ZA	1	260	?	1	559	0.2
	74	866+	9	179	8364+	2.1
%	12	1.0				

R Roundels
N/S Nodules and sealings
Com Number common to the two types of documents
% Roundel percentage of total (R and N/S)

Table 2

Main roundel users		Number of Roundels	
KH	22	31	
KH	13	21	64 of 116 = 55%
KH	11	12	
HT	31	13	of 22 = 59%
		77	of 176 = 44%

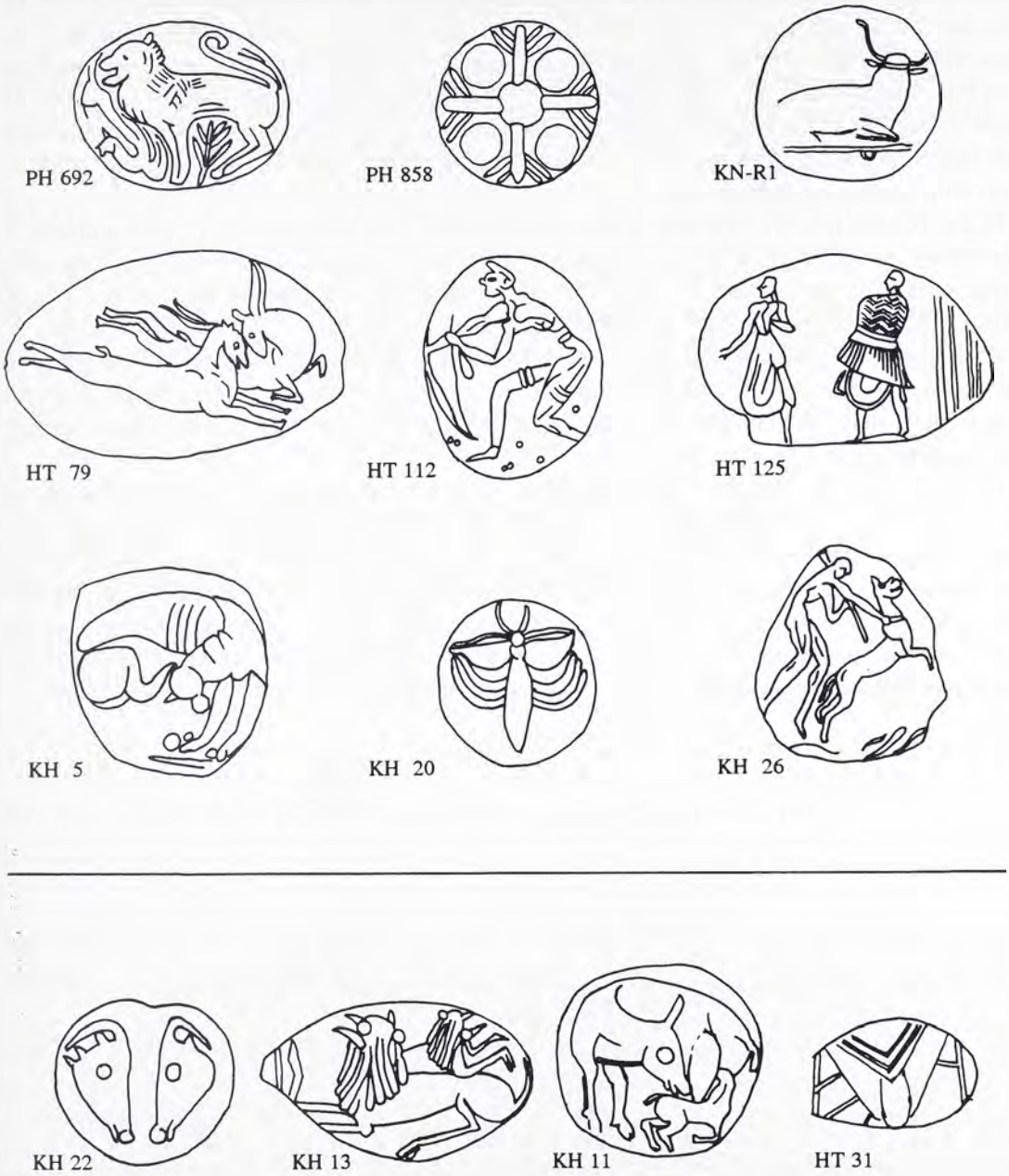

Fig. 10 Table showing the nine seal devices common to roundels and other documents (upper three rows) and the seal devices of the "main-roundel-users" (bottom row). The numbers are those referred to in this paper.

We may probe a little further by investigating briefly the actual seals and seal devices that were used on roundels *(Fig. 10)*. In the three upper rows are the nine seals common to roundels and other documents; in the bottom row those of the main-roundel-users. These 13 seals account for 20% of the seal devices on roundels and 55% of the corpus of roundels. From the MM period (upper row) we note the use of one of the few naturalistic seal devices from Phaistos (PH 692) and one 'high level' [47] naturalistic device from Knossos (KN-Rl). At Hagia Triada there are two (HT 79 and HT 125) metal rings and two of the impressions are with human beings in activity; in Khania we have two (KH 5 and KH 20) or three lentoids, again with human representations.

In the bottom row we find that 'main-roundel-users' used two lentoids (1 with animals, 1 bucranium), and 2 amygdaloids (1 with lions, 1 rather stylized insect). What is here worthy of note is that we do not find among main-roundel-users any 1. imprints from rings, 2. seal devices with human beings, nor 3. exceptionally high quality workmanship on their seals.

Although these seals accounted for a high percentage of roundels, the base is too small to draw firm conclusions. Nonetheless, on current evidence, I think it does appear that the main-roundel-users did not belong to the top-elite administrators where more 'sophisticated' seals are often found. [48]

In conclusion, the investigation of identical seals used on roundels and other documents has shown that, during the MM II–LM IB period, local bureaucrats — even important ones — were among the 'individuals' obliged to give stamped receipts to the administration. This strengthens the hypothesis of a strongly controlled bureaucratic system within Minoan administration. It also emphasizes the idea that roundels are — at least in part — means of control for disbursements from storerooms, and that the 'main-roundel-users' are perhaps 'employees' within the local administration having a markedly different status of their own.

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47 Weingarten (supra n. 19) Table 1 and ead., OxfJA 11 (1992), 30f.

48 Of course, 'low level' seals/designs are also frequent on the nodules. Whether this means an arbitrary choice of seal use or different levels of administrators working on nodules is a problem yet to be solved, e.g. Weingarten (supra n. 47) 31.

LIST OF DOCUMENTS DISCUSSED WITH DESIGNATION OF MUSEUM NUMBERS: [49]

Hagia Triada

HT 79 (*HT Wc 3022* [Allard Pierson Museum, Amsterdam, inv. no. 10.615] and HM 455–458, Firenze 94757 [incised with TE] and 94758 [incised with RO], Pigorini 71961–71963)

HT 112 (*HT Wc 3016. 3017. 3024* [HM 68, 69, and 1110], *HT Wa <1021 bis>* and HM 587)

HT 125 (*HT Wc 3015* [HM 78] and 252 nodules HM 141–151. 538. 557. Firenze 94761 [incised with KA] and 94762 [incised with KU], Pigorini 71950–71955)

Khania

KH 5 (*KH Wc 2056. 2057. 2062. 2087* and *KH Wa 1019–1021*)

KH 20 (*KH Wc 2036–2042. 2111* and *KH Wa 1005–1012*)

KH 26 (*KH Wc 2060* and *KH Wa 1536. 1537*)

Knossos

KN-Rl (*KN Wc 30* [HM 345] and HM 399, nodul, Class Pseudo IV)

Phaistos

PH 692 (*PH Wc 49* [HM 692a] and HM 692b, Sealing Fiandra's type M)

PH 858 (*PH Wc 41* [HM 1530] and HM 858, Sealing Fiandra's type D)

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[49] In Khania the museum nos. and 'linear A' nos. are the same.

SEALS AND BEADS: THEIR SHAPES AND MATERIALS COMPARED

HELEN HUGHES-BROCK

That many of the materials used for beads and seals tend to be associated with a particular range of forms is a fact we are all in a general way aware of. I want here to consider these relationships in more detail. How far does the choice of shapes to 'go with' each material depend on the physical properties of the material, and how far does it reflect cultural factors such as symbolism and taboos, whether native Aegean or part of the 'cultural baggage' brought in by certain imported materials? How much, in other words, is due to 'nature' and how much to 'nurture'? Secondly, why are some materials used predominantly for beads, others predominantly for seals, and what cultural, social and economic inferences might the differences suggest?

The briefest perusal of CMS II,1 and CMS IV or of Yule's table 'Overview of Shapes' (Yule, ECS 27ff.) suffices to strike one with the astonishing richness of the earliest Minoan seal-makers' creative imagination – and with the contrast with later generations, which had so many more materials and advanced techniques at their disposal but did so much less with them.

The shapes most closely tied to material are those in bone, particularly the epomion (e.g. CMS V Suppl. 1A Nos. 295–298), concave-convex plates (e.g. CMS V Suppl. 1A No. 144; cf. Yule, ECS 38f.) and ring and hammer-headed shapes (e.g. CMS II,1 Nos. 6–10. 31–36; V Suppl. 1A Nos. 285–294), whose basis lies in specific configurations of the metapodials. [1] Shapes in ivory, whether from elephant tusk or from the canines or incisors of hippopotamus, have more freedom, the greater amount of compact and solid material making possible chunky hemispheroids and theriomorphs such as CMS V Suppl. 1A Nos. 16–21. [2] The sim-

* Mrs. A. Xenaki-Sakellariou very generously gave me permission to publish Giamalakis 3118 and I am grateful also to Dr. Ch. Kritzas and the Archaeological Service for publication permits for that piece and HM 2232. Figs. 1b and 2 are from the CMS archive; drawings Fig. 1a are mine, kindly inked by Dr. R.D.G. Evely. For Fig. 3, reproduced from J.C. Overbeck, Keos VII, Pl. 104c and for pertinent information I thank Mrs. G.F. Kerr and Dr. T. Blackburn. For other information I thank Dr. M. Trad (Egyptian Museum, Cairo), Dr. A.P. Kozloff, A. Caropresi and M. Ballantijn (Egyptian decorated cornelians), Miss M.T. Price of the Univ. Museum, Oxford (enstatite; CMS X No. 53), Prof. Sir J. Boardman, Dr. M. Henig, Dr. O.H. Krzyszkowska, Dr. P.R.S. Moorey and Prof. I. Pini.

1 O.H. Krzyszkowska, Ivory and Related Materials. An Illustrated Guide (BICS Suppl. 59, 1990) Figs. 22. 27. 28; ead. in: CMS Beih. 3, 117ff. Pace A. Blasingham, Hydra 10, 1992, 9 sheep bones are just as usable as cattle, and leg bones could be obtained by seal-makers before cooking without significant sacrifice of food, since there is little meat on them (O.H. Krzyszkowska, personal communication).

2 Yule, ECS 61. 91ff.; H. Hughes-Brock in: CMS Beih. 3, 82.

pler cone, pyramid and cylinder shapes are closer to the raw material (tusk tips) but are produced with plenty of variation and elaboration (e.g. CMS V Suppl. 1A Nos. 34–37).

The mysterious pieces dubbed by Pini 'weiße Stücke' display a certain preference for scarab- and round-faced shapes but exhibit the same play of imagination (e.g. CMS V Suppl. 1A Nos. 213–215 and especially the theriomorphs 221–225). [3] The still poorly understood material (apparently consisting in at least some cases of a base of silicate of magnesium) [4] is clearly versatile and easily worked and counts in some sense as the first artificial material for seals, a clever invention which satisfied the carver's wish (need, when harder substances were beyond his capabilities) for a soft material and the 'consumer's' wish for a product which is strong and durable. Similar inventions were made in other regions; a comparative study of all of them might cast interesting light on the spread of technology. Alongside the early 'glazed steatite' of Egypt and Mesopotamia and the white material of the 'Gulf seals' of Dilmun (the Bahrain area) we can set the hard-baked paste of talcose steatite used in Harappan India. [5] The last substance must be a craftsman's dream – Mohs 1 in working state, increasing dramatically to Mohs 6 or 7 after firing. It is also an archaeologist's dream, because it was used for tiny disc beads, which survive in myriads, making analysis by destructive techniques no problem. [6] Unfortunately in Crete we have only seals so must wait, as Pini has pointed out, until chance presents us with some badly preserved specimen or uninformative fragment which can be sacrificed to science. Meanwhile one can ask, if the material of our 'white pieces' was so capable of producing interesting seal shapes, why was its use so short-lived and so limited? Was its manufacture tricky or tedious or costly? (Grinding the steatite to powder to make the Indian paste must have been a laborious job!). Was it a secret technique guarded by a few workshops or even a single family, as the distribution of findspots, known and alleged, might suggest? Certainly it is overwhelmingly a seal material. CMS IV Nos. 100–102, each described by Sakellarakis and Kenna as 'perhaps a bead' (presumably because of their relatively uncommon cylindrical shape), can now be recognized as simply members of the 'white pieces' seal family, No. 101 being a particularly

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3 I. Pini in: Pepragmena 6, 115ff.

4 Ibid. 124f.

5 W. Boochs, Siegel und Siegeln im Alten Ägypten (1982) 97; P.R.S. Moorey, Materials and Manufacture in Ancient Mesopotamia. The Evidence of Archaeology and Art. Metals and Metalwork. – Glazed Materials and Glass (BAR–IS 237, 1985) 133ff.; D.T. Potts, The Arabian Gulf in Antiquity, I (1990) 110ff. 159ff. 277ff.; M.R. Mughal, The Dilmun Burial Complex at Sar (State of Bahrain, Directorate of Archaeology and Museums, 1983) 64f.; K. Frifelt, The Island of Umm an-Nar, I (Jutland Arch. Soc. XXVI,1, Aarhus 1991) 116; J. Deshayes, Syria 51, 1974, 254; E.C.L. During Caspers in: J. Schotsmans – M. Taddei (eds.), South Asian Archaeology 1983 (Istanbul University Oriental series minor 23, 1985) 435ff.

6 K. Hegde, Archaeology 36, 1983, 68ff. The combination of components of the Indian material (60% silica, 30% magnesia, etc.) occurs naturally in talcose steatite. Firing at over 850° would cause the mineral to decompose and give off its water of crystallisation, forming a mixture of cristobalite, alumina and (synthetic) enstatite. This suggests similarities to what has been observed about the surface, at least, of our 'white pieces'.

What of the Los Angeles cylinder? See H. Hughes-Brock in: CMS Beih. 3, 84 n. 29. I was then unaware that enstatite can be synthetic. Natural enstatite, Mohs 5–6, is usually greenish. Enstatite is a chain silicate belonging to a problematical group which has been redefined several times.

straightforward member of Yule's Border-Leaf Complex. [7] So far only two objects have come to light which appear to be beads, i.e. unengraved (v. infra). [8]

It is a paradox of human nature that the greater the challenge is, the more lively the response. The organic materials with their limiting properties, and in the case of bone really rather uncompromising configurations, elicit an imaginative range of shapes. The soft stones, available in masses big enough to make large vases of and not cursed with awkward fracturing habits, can be worked to any shape at all but in fact seem to follow the lead of the white materials fairly tamely, content for the most part to decorate the ivory-based cone shapes with torsional fluting and ladder incising [9] and occasionally even imitating the characteristically bone ring shape and hammer-head profile. [10] The insignificance of terracotta for both seals and beads is likely to have a socio-economic explanation: an engraved object (whether or not used for impressing) had a value which required a more prestigious and hard-wearing material while humble beads could be made of clay without the expense and trouble of firing. [11]

If the early white and soft-stone seal shapes are the peacocks of Minoan seal forms, the contemporary beads are certainly peahens. The hundreds of beads visible at a glance in Xanthoudides' The Vaulted Tombs of Mesará (e.g., Pl. LVIII) are mostly quite simple – spheres, discs and cylinders, almondish forms, bicones and barrels. The occasional segmented cylinder is the most adventurous and ambitious shape, inspired ultimately, perhaps, by crinoid stems (fossilised echinoderms) or as a 'short-out' devised during the manufacture of small disc beads. [12] Many of these beads are of the blue-grey or blue-greenish

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7 Yule, ECS 47.

8 Pini (supra n. 3) 126. The 'microbeads' from early Cretan sites appear to be simply of soft stone, though most, as far as I know, have not been examined especially closely.

9 Yule, ECS 39ff. class 6a. 6b. 6f.

10 e.g. Kenna, CS 32; CMS V Suppl. 1A No. 114, cf. 292. 293 and remarks p. XVIII. Cf. J.G. Younger, Hydra 8, 1991, 43. (Evans's idea, PM III 139, is out of date.) On imitation, however, Walberg thoughtfully remarks, "The idea seems to have been to create different possibilities of perception and interpretation rather than actual imitation." (G. Walberg, Tradition and Innovation: Essays in Minoan Art [1986] 15f.).

11 On seals see I. Pini in: Aux origines de l'hellénisme; la Crète et la Grèce – hommage à Henri van Effenterre (1984) 73ff.; on beads, J.G. Younger, Hydra 8, 1991, 35ff. and H. Hughes-Brock in: Nichoria II 633. On the rather curious early trio from Gournia CMS II,1 Nos. 464ff. see now V. Fotou's account of the findspots, all Neopalatial: V. Fotou, New Light on Gournia, Aegaeum 9, 1993, 26f. 33ff. Nos. 2. 8. 12. CMS II,1 No. 466, a big fat disc, is hardly an orthodox Minoan seal. One face looks uncannily like a debased Egyptian palm, as well as like the man and dots on a terracotta disc from much farther away: P. Kjaerum, The Stamp and Cylinder Seals. Failaka-Dilmun, the Second Millennium Settlements, I,1 (Jutland Arch. Soc. XVII,1, Aarhus 1983) No. 332 (where also, p. 9, remarks on glazed steatite – cf. supra n. 5). On the other face the quartered circle with dot within each quarter is too ancient and international a device to tell much: cf. Pini op.cit. 76 and Younger op.cit. 44. It appears, e.g., on Oxford, Ashmolean Museum No. 1968.1843, associated with allegedly Cretan fakes but probably genuine, perhaps from S.E. Europe (some associated fakes were seized in Salonica): see H. Hughes-Brock in: CMS Beih. 3, 85f. n. 36.; also on CMS V Suppl. 1A No. 270 (if genuine); on CMS II,2 No. 61 it must have looked old-fashioned beside Nos. 59. 60.

12 K. Oakley, Antiquity 39, 1965, 16. H. Barge, Les parures du néolithique ancien au début de l'âge des métaux en Languedoc (1982) 26 Fig. 2,7. The Museum of Fine Arts, Boston, kindly allows me to mention a small group of beads of characteristic shapes on anonymous loan there, said to be from near Lebena (see forthcoming MFA Aegean Catalogue). Several recent books unfortunately caption as 'Prepalatial' *tout court* a colour photo-

stone found in pebble form on the local beaches. Although not unattractive, they might be thought dull in colour, but perhaps they contrasted effectively with the colours of garments or bare skin, and in any case we need, as always, to remember that they may have been worn alongside brightly coloured beads made of perishable things like seeds, painted wood and (unbaked) painted clay.

The Prepalatial beads exhibit a curious phenomenon which seems to last throughout the Bronze Age (and which I hope to treat of elsewhere) – the absence of white beads. A search through the publications of dozens of sites all over the Aegean yields extremely few beads of bone, ivory or even white stone. Why? Perhaps white was simply considered not 'decorative', but the scarcity is so pronounced that one wonders whether there was not perhaps some kind of taboo. Was white, the colour of bone, unlucky to wear on one's person? Was white associated somehow with death and mourning, like black with us? We ourselves do not use black much for jewellery; the jet and black enamel in fashion several generations ago was produced specifically for mourning wear. Whatever the reason, the contrast here between plain beads and engraved objects is striking.

The difference between beads and seals is not always a simple matter, however. [13] How were they distinguished, and how sharply, in the Minoan mind? In our own minds there is clearly some confusion. The ultimate question, for us, is not, how do we use such-and-such an object but whether we put it in the CMS or not. CMS IV Nos. 100–102 did get admitted to the CMS in 1969, though under suspicion as possible beads, and subsequent study has vindicated their presence there. But then why not the tiny green cylinder from Mochlos Tomb XX with its neatly spiralling ladder ornament (cf. CMS II,2 No. 7)? [14] The cylinder Sakellariou, CollGiam 222 looked to Xenaki-Sakellariou in 1958 more like a Neopalatial bead; Buchholz simply follows her. Yule in 1980 took it without question for a seal, however, putting it 'near' his Border-Leaf Complex (Pini and I would say MM II or III). [15]

Simple stone pendants like Mochlos XIX 14 and recent finds from Kommos and Krotos Kainourgiou raise the same question (cf. CMS V Suppl. 1A Nos. 62– 63). [16] There is a further complication when the shape of the object makes it unsuitable for sealing (as CMS II,4 No. 239, with Pini's remarks, LXXI) or when the incisions are too shallow to make any useful impression (as on CMS I Suppl. No. 36) though they are clearly intended to 'add something' to the object and usually reflect some at least elementary considerations of design (compare here CMS V No. 16 with No. 17 – one lightly scratched, one quite deeply).

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graph of the Mochlos 'necklace' despite its talismanic seal and LM relief-beads (not Seager's mistake: R.B. Seager, Explorations in the Island of Mochlos [1912] 78f. No. XXIIa Pl. X). For some remarks on the Mochlos beads and their materials see K. Branigan, Aegaeum 7, 1991, 101.

13 For a thoughtful consideration of beads, pendants, seals, amulets, spindle whorls, tools, net weights, burnishers, touchstones see P. Francis, Ornament 11,3, 1988, 33. 66–76. Cf. id., Man Makes his Mark. 7500 Years of the Seal – an Exhibit Catalogue (Center for Bead Research, Lake Placid N.Y., 1989) 1f.

14 Seager (supra n. 12) 75 Fig. 36. Some confusion: H.-G. Buchholz in: G. Bass (ed.), TransactAmPhilosSoc 57, 1967, 155 No. 33 (the object is in HM).

15 Yule, ECS 47. 209. Buchholz (supra n. 14) 153 No. 16 ('134' is wrong). Translucent red-brown cornelian.

16 Seager (supra n. 12) 72 Fig. 41. Kommos, from MM III deposit in house X: M.C. Shaw, Hesperia 62, 1993, 136 Pl. 20b.c. Krotos Kainourgiou: A. Pariente, BCH 114, 1990, 829 Fig. 204 left.

The field is often halved, sometimes quartered, the remaining lines sometimes forming a neat pattern but sometimes straggling at random (e.g. CMS II,1 No. 197). [17]

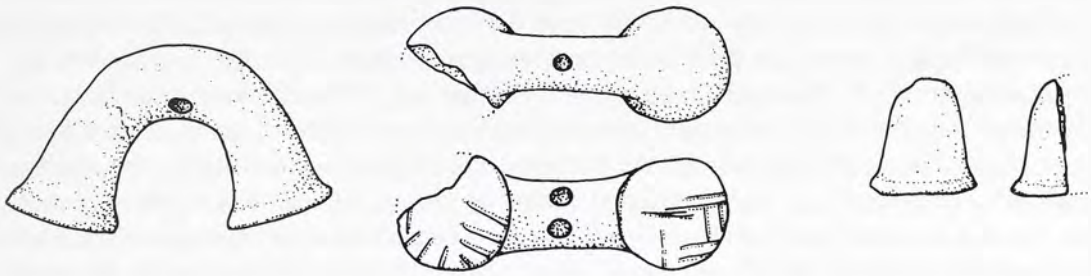

Fig. 1a White stone 'seal' from Mochlos. Heraklion Museum, Inv. No. 2232. Scale 1:1.

Fig. 1b Heraklion Museum, Inv. No. 2232. Scale approx. 1,5:1.

Fig. 2 Heraklion Museum, Coll. Giamalakis Inv. No. 3118. Scale approx. 1,5:1.

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17 On early devices from Myrtos, Krasi, Lebena see M.H. Wiencke in: CMS Beih. 0, 155f. For quartered circle designs parallels from outside the Aegean abound. See G. Brunton, Qau and Badari I (1927) Pls. XXXII-XXXIII; A. v. Wickede, Prähistorische Stempelglyptik in Vorderasien (Münchner Vorderasiatische Studien 6, 1990) Nos. 206. 511. 513. 522. 532; M. Gimbutas, The Gods and Goddesses of Old Europe (1974) Figs. 48. 80 and esp. remarks p. 89–91 on the year as 'a journey embracing the four cardinal directions', thus the recurrent cycle of life. Cf. also supra n. 11 and (on technical aspects) J.H. Betts in: CMS Beih. 3, 9.

Such schemes occur also, however, on two objects of unequivocally 'seal' shape and colour which I publish here by way of example: HM 2232, a surface find from the cemetery area on Mochlos (but imported from the Mesara?) [18] and Giamalakis 3118 *(Figs. 1. 2)*. The shape of HM 2232 looks like a concave-sided cylinder bent round; both are somewhat reminiscent of a curved pendant from Paros. [19] HM 2232 is only lightly incised, Giamalakis 3118 quite deeply. How their owners would have described them we cannot know, but we for our purposes ought now to put them in the 'seal' category, where their close cousin CMS II,1 No. 15 already is. A truncated cone of ivory from Ag. Charalambos with faces left undecorated because it broke during manufacture has been rightly included as CMS V Suppl. 1A No. 37. But what should we do with other objects of seal shape but without engraving? For example, a late Prepalatial tholos at Galana Kharakia Myrsinis in eastern Crete yielded no seals, only pendants — but one such pendant is a blotched green and black stone (steatite?) cylinder perforated like CMS V Suppl. 1A No. 270 (on which, however, M. Tsipopoulou sees disquieting features) but with its ends blank. [20] The combination of shape and perforation in both these pieces is characteristic of the white materials. [21]

Fig. 3 Beads from Keos, grave 24.

Sporadically throughout the seal-making centuries we find objects of seal shape but blank. Pini mentions two such in the shape of intertwined animal foreparts, the only 'beads' among the well over 100 'white pieces' now known. [22] What appears to be a third animal-foreparts object, but of cornelian, was found with cornelian and other beads in a MC grave on Keos —

18 Found by me, 21 May 1963, complete but in two pieces (one now missing as in Fig. 1b?). Δ-boring. White (?)steatite – Cretan or imported?

19 Pyrgos, tomb 105 (Ch. Zervos, L'art des Cyclades [1957], Figs. 257–259; J. Thimme, Art and Culture of the Cyclades in the Third Millennium B.C. [1977] Fig. 105).

20 Thus N. Platon, KretChron 13, 1959, 373f.

21 See Yule, ESC 90. Contrast the perforation of CMS VIII No. 35, a lightly scratched stone cylinder.

22 Pini (supra n. 3) 126.

interesting, since Cretan seals of the period did not travel to the Cyclades *(Fig. 3)*. [23] This is a seal shape in conception, though not very common (Yule, ECS 93f. lists only 15 examples; curiously, of his nine in hard stones three are unperforated). From the 'white pieces' workshop(s) 'beads' come as an oddity, whereas the hard-stone examples are assigned by Yule mostly to his Malia Workshop Subgroup, and at Mallia beads and seals were apparently manufactured on the same premises.

From Mallia indeed comes an undecorated bone cushion — an unfinished seal? [24] Unengraved lentoids like CMS I Suppl. No. 8 may well be such, since we seldom find lentoid beads among ordinary groups of beads, while the occasional 'lentoid manqué' (with one side flat) might be a seal-maker's reject. [25] With amygdaloids there are complications, since many faceted specimens which have a largeish flat face are certainly just beads, a well-known type not exclusive to the Aegean. [26] Such a face made them usable to the seal-engraver, however. The engraver of CMS I Suppl. No. 22 knew this but did not quite eradicate the longitudinal central groove which is a common feature of these beads. Is the faceted lentoid CMS X No. 248 out down from an amygdaloid? The rather large amygdaloid CMS V Suppl. 1A No. 47, unengraved, is of agate, a commoner choice for seals than for beads, so might have been intended originally for seal-making. So might also a few blank three-sided prisms, e.g. a fine agate with its faces set off by a groove and with a granulated gold collar from the Nichoria tholos tomb and one in rock crystal deposited with a Knossian burial — looted or salvaged from a destroyed palace workshop? [27]

The 'Petschafte' [28] of course have no ambiguous overlap with beads. They illustrate indeed a certain gap between beads and seals apparently produced by a combination of the development of palatial society, the growth of oversea contacts and technological progress. The new hard stones and the new-found ability to work them result in the shift of interest from shapes (confined to variations of detail on the basic stalk signet) to an intoxication with material and colour, which vary more in this seal family than in any other and include not only the old soft stones and even apparently bone (CMS X No. 47) but also metals, cornelian and rock crystal, jasper and chalcedony. Jasper and the milky blue-white chalcedony however are rarely found among beads now or later, [29] and the yellow jasper of which Kenna, CS 117

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23 G.F. Overbeck in: J.C. Overbeck, Keos VII 199. 203 No. 7f.; A.-L. Schallin, Hydra 10, 1992, 17ff.

24 O. Pelon, Fouilles exécutées à Mallia. Exploration des maisons et quartiers d'habitation (1963–1966) III, EtCrét 16 (1970) 68 No. 97 Pl. XXVII,5e.

25 Cf. H. Hughes-Brock in: Nichoria II 629 Nos. 2013. 2014. E. and J. Sakellarakis, Archanes (1991) Fig. 111 illustrate some gold beads which look lentoid – more economical than full spheres of gold. The technical raison d'être for the shapes in seals does not exist, of course, for beads.

26 Mostly cornelian, but not all; cf. infra n. 52. N. Wilkie in: Nichoria II 282 No. 1286 with references. (Cf. CMS I Suppl. No. 167. A serpentine possibly of this shape is now missing: V.E.G. Kenna in: J.N. Coldstream, Knossos – The Sanctuary of Demeter [BSA Suppl. 8, 1973] 127 No. 8 with CMS II,3 p. 89.)

27 N. Wilkie in: Nichoria II 282 No. 1293 Pl. 5,117; A. Evans, Archaeologia 59, 1905, 479 No. 99a,12 Fig. 101 Pl. XCI.

28 Yule, ECS 85ff. CMS X No. 47 (v. infra) is 'apparently bone': O.H. Krzyszkowska's unpublished report prepared for Erlenmeyer auction (infra n. 31).

29 Bead published as jasper: J.N. Coldstream – G.L. Huxley (eds.), Kythera (1972) 262 No. 10. The chalcedony beads from Mochlos may be imports: cf. supra n. 12.

appears to be made is rarely seen altogether in Crete (but much more commonly in Egypt). Terminology, identically, can be a problem with chalcedony. [30] One adventurous Petschaft-maker even tried his hand at pyrite — for this hard stone (Mohs 6—6,5), dark from oxidation on the surface, brassy-coloured where broken, is the material of CMS X No. 53 (now Oxford, Ashmolean Mus. No. 1989.75). [31] The Petschafte were made by the finest craftsmen of the time, connected somehow with the new palaces. [32] The supplies of the most prized, most unusual and best imported stones went to them. The makers of beads for mere jewellery got second choice.

The same system would seem to have been at work in the New Palace period. Chalcedony and jasper remain firmly in the seal workshops — jasper perhaps partly because of the association of its red and green colours with talismanic motifs (v. infra). [33] Haematite too seems to attract certain motifs (e.g. the butterfly), [34] but it may also of course have been the speciality of a particular workshop or group of workshops. Its natural properties appear to make it suitable in any case for the flattish amygdaloids and lentoids, perhaps more so than for globular, cylindrical and fluted bead shapes. [35] The high polish which can leave it shining (a dark silver colour) almost as brightly as a mirror is clearly easier to achieve on flat surfaces (though not on the motifs themselves). The conchoidal fracturing of obsidian, the very quality which made it so much prized from the Stone Age for tools, discouraged seal-makers. (The engraver of CMS VIII No. 39 gave up and let an accidental fracture on the face serve as 'motif'; cf. CMS I Suppl. No. 120. CMS XII No. 197 is called 'obsidian' but Prof. Pini kindly confirmed my suspicion that it is haematite.) Obsidian is even rarer for beads. [36] Seal-makers seem to have had first choice of various spotted and banded stones like those of Kenna, CS 3P (pink, white and green), CMS X Nos. 50. 82 (a rare pink and yellow tufa) [37] and a breccia lentoid from the Unexplored Mansion at Knossos. [38] The Palaikastro necklace furnishes a rare example of two spotted breccia beads in what was clearly a valuable assemblage. [39] Fluorite too seems to be a seal material, though it is possible that beads hide under misidentification, not having benefited from the attention of John Betts. [40] Even the

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30 see Betts – Youngers warning (infra n. 52, n. 11).

31 See colour photograph and J. Betts's description in Christie's sale catalogue, The Erlenmeyer Collection of Seals, 5 June 1989, lot 40. Pyrite has drawbacks: it reacts very readily with water, the iron sulphide turns to iron sulphate, water is absorbed and the stone cracks. CMS X No. 53 looks reddish so may also include some haematite – which of course may be what the maker thought it was.

32 L. Gorelick – A.J. Gwinnett, Iraq 54, 1992, 63.

33 On jasper (and rock crystal) as imports from Egypt see P.W. Haider, Münstersche Beiträge zur antiken Handelsgeschichte VIII/1, 1989, 12.

34 Hughes-Brock in: Nichoria II 628 gives some references on this motif.

35 Betts, CMS X, 31f. A haematite bead is mentioned among Bronze Age and Iron Age oddments from the Dictaean Cave by D.G. Hogarth, BSA 6, 1899/1900, 113.

36 For objects of the rare Gyali obsidian see H. Hughes-Brock in: Coldstream (supra n. 26) 119 No. 38. On obsidian more generally see D. Evely in: Popham, MUM 230ff.

37 See Betts (supra n. 31) lots 48. 62.

38 Betts in: Popham, MUM 190. 194 No. 9.

39 L.H. Sackett – M.R. Popham, BSA 60, 1965, 303 and colour Pl. opp. p. 248.

40 Betts in: Popham, MUM 190f.

agates lean towards seals (agate beads belong mostly to rich burials) — but with some material imported in bead form but reworked into seals. [41] (Consider CMS I Nos. 207. 238. 246 and II,3 No. 389; and is I Suppl. No. 8 a victim of the process?) That the seal industry determined the import and distribution of valuable stones is proven, it seems to me, by the case of garnet. Garnet was available in Egypt for making little globular beads hardly exceeding 5 mm in diameter. With only one possible exception known to me, we do not find hardly it in Crete. [42] This suggests to me that if a stone was no good for seals, it was not wanted there.

Rock crystal, less clear quartzes, cornelian, amethyst and gold, all relatively abundant and (being without troublesome peculiarities) [43] versatile, produce both seals and beads — lapis lazuli too, though it was *not* abundant and some of the sporadic finds in the Aegean reflect rather closely both its foreign origin and its traditional association, caused by its fracture pattern, with flat slab and block shapes. [44]

The bead specialities are amber and the vitreous materials. Amber is a special case. It entered the Greek Mainland at the end of the MBA, before there was anything there corresponding to the Minoan palace economy. I suspect that it remained in private hands, being passed down and redistributed as heirlooms and gifts by individuals and families. What little amber reached Crete probably came as the personal jewellery of Mainlanders and never got into the workshop system. No doubt seal-makers and their patrons would have been delighted to get hold of it, but either they failed to do so — did the Mainlanders prevent it? — or our scant knowledge of LM I tombs has distorted the evidence. Of the amber seals reported only CMS I No. 154 survives — an amygdaloid which could have been made out of very large globular bead cut down. An amygdaloid *bead* possibly made in the same way was worn as mate to a cornelian talismanic of very similar colour, size and shape by an elegant youth (with Cretan connexions?) buried in the Athenian Agora. [45]

In the LBA faience and glass become the distinctive materials for beads, widening the gap between beads and seals. Faience never took root as it did at times elsewhere for seals and in

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41 On agates and on possible Harappan beads see J.G. Younger, ArchNews VIII/2–3, 1979, 42 – à propos CMS I Nos. 197. 199. On these two seals see H. Hughes-Brock in: R. Hägg – G.C. Nordquist – B. Wells (eds.), Asine III, chapter on Tomb I,1 (forthcoming).

42 The exception is two beads, virtually identical, from the Royal Road at Knossos, one unremarkably from a good Roman level but other found in a LM context (mostly IB with some II–IIIA2). Permission to mention these was kindly granted by S. Hood and by the Managing Committee of the BSA. J. Ogden, Jewellery of the Ancient World (1982) 98f. speaks of the "occasional presence of garnets in Mycenaean goldwork", probably from Egypt, but without quoting examples. He points out that the large slices used in the European Dark Ages must come from some other geological source.

43 M. Sax, Iraq 53, 1991, 91 regards rock crystal as "perhaps the most difficult material ever worked for seals" because of its hardness (Mohs 7) and brittleness.

44 Cf. A. Harding, The Mycenaeans and Europe (1984) 58; H. Hughes-Brock in: Nichoria II 627f. See the well illustrated article by J.M. Kenoyer, Ornament 15,3, 1992, 70ff. 86f. Joan Aruz at this conference drew attention to recut lapis lazuli from Phourni Archanon.

45 For more on this see H. Hughes-Brock in: C.W. Beck – J. Bouzek (eds.), Amber in Archaeology (1993) 219ff.; also ead. in: J.M. Todd (ed.), Studies in Baltic Amber (Journal of Baltic Studies 16, special issue, 1985), 257ff.; H. Hughes-Brock – A. Harding, BSA 69, 1974, 145ff.

Egypt for scarabs. The cross-hatched cylindrical faience beads with a circumferential groove near each end are a distinctive type going back to a very old and widespread (and still flourishing) scheme of decoration on shinbone cylinders; they have nothing to do with our seals. [46] In glass, seals are unadventurous (overwhelmingly pointed-back lentoids), [47] while beads in both glass and faience burst into variety with three-dimensional seed, grain, flower, shell and grooved shapes, as well as flat-backed relief-beads, of which a large number can be seen at a glance in the table in Sakellariou, ThTM 292ff. These are a world in themselves. Many are recognisable (though stylised) copies of natural life-forms (of which the lentil is not one — v. supra n. 25). [48] Seals portray such things in their motifs but not in their shapes (with rare exceptions, e.g. the trochus shell Kenna, CS 136 and the 'heart' or 'shield' shape of Kenna, CS 187, which *is* shared with beads and perhaps even with the inscribed ladle from Troullos and may also be inspired by a shell shape — it looks somewhat like an elongated crab shell). CMS XII No. 120 must belong to the family of peg-top pendants though included in the CMS because of the cross incised on its top; the shape, like the poppy discussed below, looks practical for seals but is not used for them. The cross shape of Sakellariou, CollGiam 147, CMS XII No. 119 and a cornelian in Oxford is rare for seals and beads alike. [49]

The interplay of natural and cultural factors is seen at its richest in cornelian. The long sturdy pieces it can occur in, together with its regular and predictable fracturing habits, make it ideal for long cylinders. [50] Better still for beads, since they do not require a flat surface, is the barrel shape: thickening the middle of course reduces the risk of calamity if the long perforations, drilled from both ends, do not meet neatly. The very long specimens (up to 12 cm!) seen in ancient Mesopotamia and to the present day in India are not found in the Aegean, although we do have cornelian beads of 4 cm or so. [51] Amygdaloids, faceted to furnish a flat expanse of face, are found in large dimensions in New Kingdom Egypt. 'Well over 50 per cent' of Minoan amygdaloid seals are cornelian; the corresponding beads are

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46 See, e.g., CMS II,3 No. 59; G.F. Bass, AJA 67, 1963, 356; S.F. Kromholz, The Bronze Age Necropolis at Ayia Paraskevi, Nicosia (1982) 294; on specimens from Hasanlu and their use, M.I. Marcus, Expedition 31, 1989, 59 = ASSA, 182; finally a curious early find, E.H. Hall, Excavations in Eastern Crete, Sphoungaras (University of Pennsylvania, The Museum Anthropol. Publications III,2, 1912) 67f. Fig. 40A.

47 I. Pini, JbZMusMainz 28, 1981, 48ff.

48 On some of these see Hughes-Brock (supra n. 41) passim.

49 'Heart-shaped': most recently G. de Pierpont, OpAth 18, 1990, 165, where references; cf. S. Hood – G. Huxley – N. Sandars, BSA 53/54, 1958/59, 250. 212 ('perhaps amuletic rather than decorative', agreeing with Evans, PM III 411). The ladle: Evans, PM I Figs. 462-463; Godart – Olivier, GORILA 4, 57ff. Peg-top: Hughes-Brock in: Nichoria II 629; Evans (supra n. 27) 479 thought the shape 'perhaps derived from arrowheads'. Cruciform: Chr. Televandou, AEphem 1984, 37f. CMS XII No. 119 is rather irregularly shaped – a defective lentoid cut down? The Oxford stone from H. Pelagia is cross-hatched on one side (Boardman, GGFR 391).

50 B. Allehin in: J.E. van Lohuizen-de Leeuw (ed.), South Asian Archaeology 1975 (1979), 91ff.; G.L. Possehl, Expedition 23, 1981, 39ff.; J.M. Kenoyer – M. Vidale – K.K. Bhan, WorldA 23, 1991, 44ff. Cf. Gorelick – Gwinnett (supra n. 32), esp. 60ff.

51 Evans mentions a "large oval bead of pale lemon-coloured translucent steatite... Original length 4.2 cm": (supra n. 27) 544 No. 33. I suspect this is pale yellow chalcedony, which one might call pale cornelian. Steatite of course could easily be made into very long beads but it was not. The only other very long beads are in lapis lazuli, e.g. at Ur.

quite common. [52] These and the cylinders naturally offer themselves as vehicles for writing and even for pictures. (Writing on *beads*, not for impressing, sometimes occurs outside the Aegean in various materials. [53]) The Pharaohs' hunting scarabs with their abundant verbiage are large objects and thus mostly of faience but there are cornelian beads, mostly barrels, with cartouches. I have even seen in Cairo a cornelian amygdaloid bead (unpublished, as far as I can discover) with a picture worked in white: Pharaoh (apparently Amenhotep III), wearing the crown of Lower Egypt, striking a lion, a cartouche in the field and a delicate border of dot rosettes. [54] Cornelian, then, is a material for 'conveying messages'. Nor need the messages always be added to the object: in two cases an idea is conveyed by the shape and colour themselves. The red poppy beads common around the eastern Mediterranean could with their signet-like shape and nice flat face easily be used (in a bigger size) as seals or inscribed amulets but they never are. [55] The opium poppy by itself spoke of health, medicine, ecstasy, sleep, death and probably even (because supposedly an aphrodisiac, if only in the sense that relaxation improves performance) sex and fertility. With all that on one small object, added signs were unnecessary! In the Aegean the other common red amulet-bead is the figure-of-eight shield. [56] However, since these do occur in other materials, whereas the poppies are overwhelmingly in strong red cornelian (or sometimes jasper), it is conceivable that the cornelians were the speciality of particular workshops and that the red colour has no inherent connexion with the shape. In CMS II,4 No. 189 we apparently have red amulet-bead (not bright red but at least 'sard') and engraved seal combined. It has sometimes been thought that a cornelian or an amber bead found alone in an undisturbed burial had some amuletic value, but it might of course be just a prized centrepiece from a string composed otherwise of perishable materials. [57]

In seals the popularity of red stone and of green (jasper) for the talismanics must surely mean more than that the producers of those pieces happened to have particularly good

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52 J.H. Betts – J.G. Younger, BSA 74, 1979, 277 n. 11; supra n. 26; also C. Renfrew – J.F. Cherry in: C. Renfrew, The Archaeology of Cult: The Sanctuary at Phylakopi (BSA Suppl. 18, 1985) 317ff.

53 E.A. Braun-Holzinger, Mesopotamische Weihgaben der frühdynastischen bis altbabylonischen Zeit (Heidelberger Studien zum Alten Orient, 3, 1991) 360ff.; R.V. McCleary, Bead Study Trust Newsletter 18, 1991, 3f.; ibid. 12, 1988, 1.

54 Egyptian Museum, Cairo, in Room 22: Special Register 5069, J.T. 14/5/26/4. 2.0 x 1.5 cm. The white decoration evidently follows the ancient tradition of white etched decoration on cornelian beads, on which much literature: see principally E.C.L. During Caspers, BICS 10, 1971, 83ff., and S. Ratnagar, Encounters: The Westerly Trade of the Harappa Civilization (1981) 128ff.

55 See the classic article by P. Kretikos – S. Papadaki, AEphem 1963, 80ff., of which some criticisms by C.P. Behn, Listy Filologické 109/4, 1986, 193ff. For an interesting wider perspective see A. Sherratt in: J. Goodman – P. Lovejoy – A. Sherratt (eds.), Consuming Habits: Drugs in History and Anthropology (1995).

56 A small selection of references: H.R. Hastings, AJA 9, 1905, 285ff.; A. Xenaki-Sakellariou, Gnomon 1985, 342 on CMS I Suppl. No. 13; VII No. 132; Younger, Iconography 273ff. With their flat back and pair (usually) of string-holes these can also be seen as a kind of relief-bead – but it is worth noting that without these features the object would be harder to make and easier to break.

57 See H. Hughes-Brock in: Todd (supra n. 45) 259 with references; Renfrew (supra n. 52) 385. Cf. W. Peck, Journ. Soc. Study of Eg. Antiquities (Toronto) 13,2, 1983, 73f. Some examples: J. Deshayes, Argos – Les fouilles de la Deiras (1966) 103, No. DM 83; G. Touchais, BCH 107, 1983, 829 (Voleones Amariou); id., BCH 110, 1986, 732 (Psara, Archontiki).

supplies of it. (The geological sources of cornelian are fairly numerous and we cannot as yet know where the Aegean supplies originated. [58] Heating, which can be repeated many times during manufacture, deepens the red colour.) [59] Whether this or that stone carried the symbolic values in the Aegean that it had elsewhere we cannot know, [60] but the popularity of red and green has interesting parallels in later times. In the 5th and 4th centuries the Graeco-Phoenician or Punic scarabs served a market which greatly preferred green, no matter what stone, whereas the Etruscans at the very same period overwhelmingly made scarabs of bright red cornelian. [61] Roman legionaries, whose gem devices not surprisingly tend to Mars and heroic subjects, strongly favoured red and after red, green. [62] These colours of life, vegetation and rebirth after death certainly make sense in combination with such talismanic motifs as bird, boat and papyrus which figure in Watrous's thought-provoking recent study of Minoan painted larnakes. [63] Here indeed may lie a fertile field for further study.

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58 Younger (supra n. 41); During Caspers (supra n. 54) 95ff.; Ratnagar (supra n. 54); Kromholz (supra n. 46) 296; T.W. Beale, WorldA 5, 1973, 136f.; W. Heimpel, ZA 77, 1987, 51f.

59 Kenoyer et al. (supra n. 50) 55.

60 S. Aufrère, REG 34, 1982/83, 3ff.; C. Müller-Winkler, Die ägyptischen Objekt-Amulette mit Publikation der Sammlung des Biblischen Instituts der Universität Freiburg Schweiz (Orbis Biblicus et Orientalis, series arch., 5 (1987) 485ff.; R.C. Thompson, A Dictionary of Assyrian Chemistry and Geology (1936) XXXVII–XL. In the Aegean we must beware of 'reading back' from later sources, e.g., Pliny. Cf. E. Wasilewska, JPrehistRel. 5, 1991, 36ff.

61 J. Boardman, Jewellery Studies 5, 1992, 30f.

62 M. Henig (personal communication and short published accounts). Fuller treatment in J.D. Zienkiewicz, The Legionary Fortress Baths at Caerleon, II: the Finds (1986) 120ff.

63 L.V. Watrous, Hesperia 60, 1991, 285ff.

ARCHITECTURE IN GLYPTIC CULT SCENES: THE MINOAN EXAMPLES

KATHLEEN KRATTENMAKER

Because they are generally accepted as depictions of cult, many of the representations on Minoan seals and seal impressions have been used as evidence for Minoan cult practices. A number of these representations include built structures, which are then held to be shrines. I propose to examine here some of the so-called cult scenes — those which include architecture — and to briefly address the problem of identifying cult scenes and building types in Minoan iconography. In the first part of this paper, I propose some criteria for identifying cult scenes. In the second part, the architecture in some of these scenes is examined. [1] *Fig. 1* illustrates the scenes to be discussed.

In Minoan glyptic, almost all buildings occur in scenes identified as cultic. Yet there has been no real explanation of what constitutes a cult scene. While it may seem likely that many of the scenes did depict cult practices, there have been no stated criteria which would enable

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* Source of illustrations: *Fig. 1,1*: W.-D. Niemeier in: CMS Beih. 3, 169 Abb. 2,1; *Fig. 1,2*: Niemeier op.cit. 175 Abb. 5,2; *Fig. 1,3*: Niemeier op.cit. 169 Abb. 2,4; *Fig. 1,4*: Niemeier op.cit. 182 Abb. 6,1; *Fig. 1,5*: Niemeier op.cit. 175 Abb. 5,6; *Fig. 1,6*: Niemeier op.cit. 182 Abb. 6,7; *Fig. 1,7*: D. Levi, ASAtene 8/9, 1925/26, 131 Fig. 141; *Fig. 1,8*: Niemeier op.cit. 175 Abb. 5,5; *Fig. 1,9*: Niemeier op.cit. 182 Abb. 6,8; *Fig. 1,10*: Niemeier op.cit. 173 Abb. 4,6; *Fig. 1,11*: CMS II,3 Nr. 56; *Fig. 1,12*: N. Marinatos in: CMS Beih. 3, 129 Fig. 5; *Fig. 1,13*: D.G. Hogarth, JHS 22, 1902, 77 Fig. 3; *Fig. 1,14*: Niemeier op.cit. 182 Abb. 6,4; *Fig. 1,15*: Levi op.cit. 118 Fig. 119; *Fig. 1,16*: Niemeier op.cit. 168 Abb. 1,9; *Fig. 1,17*: Papapostolou, Sphragismata Pl. 44 No. 32; *Fig. 1,18*: Niemeier op.cit. 173 Abb. 4,8; *Fig. 1,19*: Niemeier op.cit. 168 Abb. 1,10; *Fig. 1,20*: Niemeier op.cit. 169 Abb. 2,5; *Fig. 1,21*: Niemeier op.cit. 173 Abb. 4,11; *Fig. 1,22*: Niemeier op.cit. 168 Abb. 1,8; *Fig. 1,23*: Niemeier op.cit. 182 Abb. 6,2; *Fig. 1,24*: Hogarth op.cit. 77 Fig. 2; *Fig. 1,25*: Niemeier op.cit. 168 Abb. 1,12; *Fig. 1,26*: Niemeier op.cit. 182 Abb. 6,3; *Fig. 2*: F. Halbherr – E. Stefani – L. Banti, ASAtene 55, 1977, 97 Fig. 65; *Fig. 3,1*: Hogarth op.cit. 77 Fig. 3; *Fig. 3,2*: CMS II,3 Nr. 86; *Fig. 3,3*: CMS II,3 Nr. 287; *Fig. 3,4*: CMS II,3 Nr. 117; *Fig. 4,1*: Niemeier op.cit. 173 Abb 4,11; *Fig. 4,2*: Niemeier op.cit. 173 Abb. 4,8; *Fig. 4,3*: Levi op.cit. 118 Fig. 119; *Fig. 4,4*: Hogarth op. cit. 77 Fig. 2; *Fig. 4,5*: Papapostolou, Sphragismata Pl. 44 Nr. 32; *Fig. 5*: Evans, PM II 600 Fig. 373b; *Fig. 6*: Evans, PM II 603 Fig. 376; *Fig. 7*: J. Shaw, AJA 82, 1978, 434 Fig. 8; *Fig. 8*: Shaw op.cit. 441 Fig. 10; *Fig. 9,1*: Niemeier op.cit. 168 Abb. 1,8; *Fig. 9,2*: Niemeier op.cit. 168 Abb. 1,9; *Fig. 9,3*: Niemeier op.cit. 168 Abb. 1,10; *Fig. 9,4*: Gill, KSPI Pl. 19 No. U56; *Fig. 9,5*: Niemeier op.cit. 169 Abb. 2,4; *Fig. 9,6*: Niemeier op.cit. 169 Abb. 2,5; *Fig. 10*: Shaw op.cit. 436 Fig. 9.

Drawing Figs. 1,11; 1,17; 3,2.3.4; 4,5: Th. Happel.

[1] This paper has grown out of the work on my dissertation, which examines all the two-dimensional representations of architecture from Minoan Crete. K. Krattenmaker, Minoan Architectural Representation (Bryn Mawr College dissertation 1991). I would like to thank Ingo Pini for inviting me to participate in this symposium and Jean-Claude Poursat for his graciousness in hosting it. Thanks also go to James Wright for reading preliminary drafts of the paper and for his helpful comments and suggestions. Any errors are my own.

one to say with a high degree of certainty that a scene was or was not a representation of cult. Without such criteria, analysis is difficult and conclusions about the character of buildings and figures in a scene are left open to criticism.

While pursuing this topic in connection with a larger study of Minoan architectural representation in general, I became interested in what iconographic setting could tell me about the architecture in Minoan glyptic, particularly in the 'cult scenes'. It seemed best to secure the first step of identifying cult scenes before taking the second step of identifying shrines. When a scene can be firmly identified as cultic, the architecture in it can than be recognized as a structure where cult was practiced — either a free-standing shrine or a cult area in a larger building.

In the opening chapter in his book on the sanctuary at Phylakopi, Renfrew called for an explicit 'framework of inference' in any discussion of religion and cult. Such a framework would, in his words, "allow one to make warranted statements about the past, in this case about past cult practice and religious belief, on the basis of archaeological evidence". [2] Renfrew designed his framework for the wide range of archaeological material from the excavations on Phylakopi, but his method can be applied with equal success to the more circumscribed problems of Minoan glyptic and the interpretation of iconography as it relates to cult and cult practices.

Since archaeological context and artifact type are of little help in revealing cult associations in the case of Minoan glyptic, the 'framework of inference' used here is designed to examine iconography. It is based on a set of criteria met by the presence of certain key elements in a scene which will suggest it is a representation of cult. Because the depictions on rings, seals and seal impressions are figural, their iconography is rich in information which is not difficult to read. The initial step of recognizing or reading the separate parts of a representation — what Lyvia Morgan calls iconic identification — [3] comes fairly easily in much of Minoan art, even in the smaller, abbreviated representations on rings and seals. In Minoan art we are also fortunate in that we know a good deal about many of the objects depicted, for actual examples have been found on Crete in good archaeological contexts. These same objects are also depicted in frescoes and stone relief vases where the larger pictorial field provides additional information. Much, then, is known about their use and character, and we can make informed statements about their significance in any given representation.

Known objects in a scene can inform us about the unknown and, in general, reveal the character of a scene. The presence of objects whose archaeological context associates them with cult practices will connect the scene with cult. While this is a principle most archaeologists recognize and follow, it helps to place it in the forefront of any analysis, to avoid reversing the process, in other words, first identifying a cult scene, then labeling everything in it a cult object.

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2 C. Renfrew, The Archaeology of Cult: the Sanctuary at Phylakopi, BSA Suppl. 18, 1985, 11.

3 L. Morgan in: L'Iconographie Minoenne 5.

Fig. 1 Minoan seals and sealings: 'the cult scenes'.

Along with cult objects, certain types of figures and behavior will identify a scene as cultic. Behavior and creatures not found in the natural world are sometimes present in a representation. They indicate a mythic, symbolic world — the realm of religion and cult. One characteristic of religious iconography is repetition. Meaningful forms or objects are repeated, often in the same combinations. [4] Representations of cult in Minoan art can then be expected to be repetitive and patterned, and in fact, this is the case. Lyvia Morgan has pointed out one such pattern in Aegean representations, the figure standing with raised arm in front of a building crowned by horns of consecration. [5] Such combinations are not arbitrary and their importance cannot be overstressed. To quote Morgan, "It is the recurrent use of associations which most persuasively reveals meaning". [6]

The principles outlined in the preceding paragraphs may be summarized as follows: 1) known objects can inform us about the character of a scene; 2) unnatural behavior and creatures take a representation into the mythical, religious realm; and 3) repeated gestures and combinations of motifs are indicative of cult and help reveal meaning. With these as a foundation, I propose the following criteria for identifying cult scenes in Minoan art:

Criteria for the Identification of Cult Scenes in Minoan Glyptic

1 The presence of figures engaged in non-human or extraordinary activity, such as flight;

2 The presence of fantastic or hybrid creatures such as griffins or winged figures;

3 The presence of altars;

4 The presence of objects or symbols which have been associated with cult;

5 The presence of figures engaged in formal activities or gestures which have a ritual significance.

Criteria One and Two most firmly indicate we are dealing with representations of cult. The presence of a bird-headed creature, for instance, or one of the small hovering 'epiphany' figures, takes the scene out of everyday reality into an otherworldly realm.

On the other hand, Criteria Three through Five are based on the presence of objects and activities clearly at home in the material world. Their connection to cult practices has been determined by their archaeological and iconographic contexts. For example, we know that rhyta function as ritual vessels because they have been found in archaeological contexts which suggest ritual use, there are rhyta on which ritual scenes are depicted, and there are representations which show rhyta being used in formal rites or ceremonies. [7]

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4 Renfrew (supra n. 2) 13f.

5 Morgan (supra n. 3) 14ff.; 15 Fig. 4; and Morgan, MWPT 118. 201f.

6 Morgan, MWPT 15.

7 B. Koehl in: Hägg – Marinatos, SC 179ff. has demonstrated that some types of rhyta, particularly the close-necked types, may have been used mostly in domestic context. Others, for example the conical rhyta, have been found in contexts which indicate their use in cult.

The presence in a scene of altars, Criterion Three, clearly imply cult practices. There are three types of altars common in Minoan Crete — the rectangular, the incurved and the stepped. They are known from actual physical remains and are illustrated together on the Zakro rhyton. Any ambiguity about the cult context of the physical remains is offset by the clear cult setting of the altars depicted on the rhyton, which shows a peak sanctuary within a walled courtyard or temenos.

Under Criterion Four — the presence of objects or symbols which have been associated with cult— I include the following:

Objects Indicative of Cult

Horns of Consecration
Double Axes
Sacral Knots
Rhyta
Festoons
Trees on top of built structures
Floating Motifs

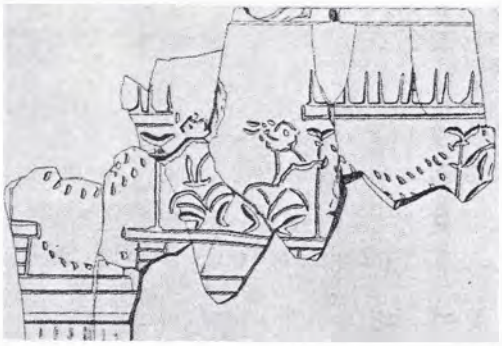

Fig. 2 Ivory pyxis from Ayia Triada.

Most of the objects included here have long been accepted as cult objects. Horns of consecration, double axes, sacral knots and rhyta have been discussed by others before me and are an accepted part of the Minoan cult repertoire. [8] Festoons, the fifth object in the list, are often shown hanging between the columns of buildings crowned by horns of consecration, for example, on the structures engraved on a seal impression and on an ivory

[8] For a discussion of cult symbols and equipment see G. Gesell, Town, Palace and House Cult in Minoan Crete, SIMA 67 (1985) 62ff.

pyxis from Ayia Triada *(Figs. 1,19. 2)*. Festoons are associated with horns of consecration [9] and crocuses [10] on Late Minoan IB pottery, often on ritual vessels such as rhyta, indicating a possible cult association. It can also be noted that, by its nature, the decorative festoon implies festivities and would be a natural accompaniment to ritual or cult. [11]

Trees have long been considered to hold a place in Minoan cult, beginning with Evans [12] and continuing with Nilsson's discussion of the Minoan Tree Cult [13] and, most recently, Nanno Marinatos' paper at the last CMS conference. [14] The link between tree and cult is especially clear in the distinctive combination which shows a tree on top of a building or a stepped altar. Particularly telling examples can be found on the Epiphany Ring *(Fig. 1,1)* and on a seal impression from Zakro *(Fig. 1,20)*, where a tree is shown on top of a building or stepped altar on the right and a hovering epiphany figure is shown in the center of the scene.

Floating motifs in a glyptic representation also have a special significance, for they have a limited occurrence. Niemeier has stated that they appear only in representations of the epiphany of deities. [15] While they do not occur in scenes that include a hovering epiphany figure, they do occur in scenes which show a type of ecstatic behavior, which some have believed was meant to call forth the deity *(see Figs. 1,2. 1,5. 1,8)*, [16] or other types of ritual behavior such as special gestures or processions. In the scene on a ring from Kalyvia *(Fig. 1,10)*, an example of the latter, one of the processing figures is a jackal-headed creature or a monkey, behaving as a human and thus filling Criterion Two. Floating motifs appear only in these suggestive combinations and not in more ordinary scenes. This fact, along with their symbolic nature, makes them a strong indication of cult.

Criterion Number Five — the presence of figures engaged in formal activities or gestures— is the most difficult of the criteria to define, because we know of gestures and activities only from two-dimensional representations or figurines. The lack of information from other contexts makes it difficult to avoid a circular argument. The gestures and activities I include in my lists are thus of a few specific types found repeated in similar contexts. This type of patterning is typical of Minoan iconography, where there is a limited number of elements and figures adopt a limited range of gestures. [17] Morgan has discussed a

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9 W.-D. Niemeier, Die Palaststilkeramik von Knossos (1985) 121 Fig. 2.

10 P. Betancourt, The History of Minoan Pottery (1985) 143 Fig. 108; M. Popham, BSA 62, 1967, 340 Fig. 2,6.

11 In his discussion of the Fresco of the Garlands from Knossos, P. Warren noted the sacred uses of the garland or wreath in Classical Greece, and argued for a similar use in Minoan Crete. He sees the suspended flower chain, or festoon, as an alternate form of the garland. P. Warren in: L'Iconographie Minoenne 204ff.

12 A. Evans, JHS 21, 1901, 67ff.; id., The Mycenaean Tree and Pillar Cult (1901).

13 Nilsson, MMR² 262ff.

14 N. Marinatos in: CMS Beih. 3, 127ff.

15 W.-D. Niemeier in: CMS Beih. 3, 241.

16 Among these were F. Matz and A. Furumark. F. Matz, Göttererscheinung und Kultbild im minoischen Kreta (AbhMainz 1958: 7) 28; A. Furumark, OpAth 6, 1965, 92. More recently, R. Hägg implies the same in his writings on Minoan epiphany. R. Hägg, BICS 30 (1983) 184.

17 Morgan (supra n. 3) 14; W.-D. Niemeier in: E.B. French – K.A. Wardle (eds.), Problems in Greek Prehistory (1988) 238ff.

number of these gestures, calling them 'conventional gestures of specific import'. [18] I include a number of her gestures in my list and largely follow her definitions.

Gestures

Raised, bent arm

Votive gesture

Commanding gesture

Hand to shoulder

Arms akimbo

The first gesture is a bent arm raised so that the hand is held in front of the face with palm facing outward. As mentioned earlier, Morgan identifies this gesture as occurring in association with buildings decorated with horns of consecration. It is one of the commonest gestures in Minoan art and appears to be a way of showing reverence, a type of salute. It is found directed at other people as well as at buildings, and it may also be shown with both arms raised, as on one of the seal impressions from Ayia Triada *(Fig. 1,19)*. This first gesture is very similar to another of Morgan's conventional gestures of specific import, which is typical of Minoan votive figurines. As she described it, one or both arms are raised in front of the body with bent elbows, the hand or hands held in front of the face or to the forehead. I would like to limit the definition to the hand or hands touching the forehead, to differentiate it from the first gesture, in which the hand is held in front of the face. The votive gesture is displayed by the male figure on the so-called Mother on the Mountain sealing from Knossos *(Fig. 1,3)*, and possibly by the male figure on another Knossos sealing *(Fig. 1,16)*, who also displays the sway-back pose of the votive figurine.

In the third gesture, the arm is held outstretched at shoulder height, the hand usually grasping a long staff. This gesture appears on the Epiphany Ring *(Fig. 1,1)* and the Mother on the Mountain seal impression *(Fig. 1,3)*. In the first, it is employed by a male epiphany figure and, in the second, by a female figure standing on a mountain top. Other well-known examples of this gesture are to be found on the Chieftain Cup, the Khania Master Impression.[19] and the Berlin Ring. [20] Used by figures in a commanding position, it is a gesture of authority. [21]

The fourth gesture listed here, not discussed by Morgan, involves touching the hand to one shoulder while the other arm is extended, usually along the side of the body. Among glyptic representations which include architecture, this gesture appears on the Arkhanes Ring *(Fig. 1,2)*, on a ring from Gypsades *(Fig. 1,4)*, and on seal impressions from Khania *(Fig. 1,23)* and Ayia Triada *(Fig. 1,26)*. In these examples, and in all other examples that I

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18 Morgan, MWPT 117f.

19 Hallager, MI Figs. 9–17.

20 CMS XI No. 28.

21 Hallager, MI 31.

know of, the gesture is used only by female figures in formal dress. Although the glyptic examples show the hand touching the shoulder of the same arm, the gesture may be related to one employed by a votive figurine from Piskokephalo, who is shown touching one hand to her opposite shoulder. [22]

The last gesture, arms akimbo with hands on hips, may seem the least distinctive or most ordinary of the gestures included here. [23] Its appearance in specific contexts, however, presents a more formal picture. In glyptic representations with architecture its most noteworthy appearance occurs on a sealing from Ayia Triada *(Fig. 1,14)*, where three female figures, one large and two small, all hold this pose. These same three figures can be found in the same arrangement on at least one other Minoan seal. [24] Most significantly, the gesture is adopted by the female epiphany figure on the seal impression from Zakro *(Fig. 1,20)*. In all cases, it is women in the long, flounced skirts typical of Minoan female formal dress who display this pose. Their dress is often completed by thick garlands worn round the neck, so that in pose and dress they recall the female statues of various sizes from the temple at Ayia Irini on Keos. [25]

Activities

Boulder/bactyl hugging

Tree-shaking

Procession

Presentation

Circle dance

Agrimia carried by female figures

The activities included under Criterion Five can be characterized as formal activities or unusual activities of an ecstatic nature. The first two activities, boulder/bactyl hugging and tree-shaking, are of the ecstatic type. Both are shown in contexts which eliminate the possibility that they represent mundane activities — for example, fruit harvesting in the case of tree-shaking. The distinctive and unusual nature of these activities places them in the realm of ritual. Procession, activity three, is by nature formal and ceremonial and is typical of Minoan ritual behavior, as exemplified by the well-known procession frescos from the palace at Knossos. Processions often end in the presentation of gifts, so that presentation, the fourth activity, can be considered a corrollary to the third. A seal impression from Ayia Triada *(Fig. 1,7)* shows a procession away from a building, with one of the men carrying the so-called sacred knot.

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22 Marinatos – Hirmer, CaM Pl. 17.

23 Gesell (supra n. 8) 48 identifies this stance as a dancing pose.

24 CMS II,3 No. 218.

25 M. Caskey, Keos II, 1. The Temple of Ayia Irini. The Statues (1986) Pls. 8–10. 23. 41. 69; ead. in: Hägg – Marinatos, SC 132.

The fifth activity I list is dance, long considered to play a role in Minoan ritual. At present, I include only circular dances, since their role in cult practice is most firmly indicated by the archaeological evidence, [26] and because of the difficulty of identifying other types of dance movements in Minoan iconography. A ring from Isopata *(Fig. 1,11)* and a seal impression from Khania *(Fig. 1,12)* depict circle dances performed near buildings.

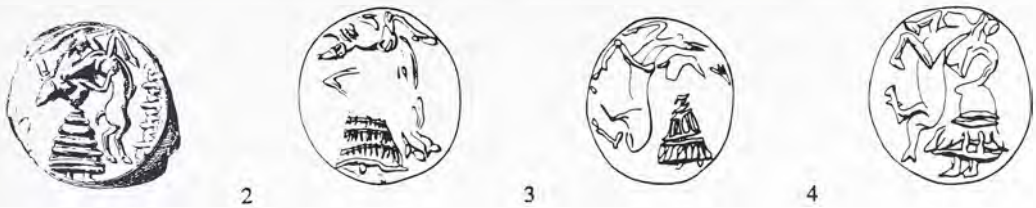

Fig. 3 Minoan seals and sealings: woman carrying agrimia.

Rather than considering the presence of agrimia themselves as an indication of cult, I include them in the sixth activity in the specific combination which shows a woman in a flounced skirt carrying an agrimi over her shoulder *(Fig. 3)*. Since this type of formal dress is unlikely to be shepherdess' gear, a special activity is indicated. Agrimia are associated with peak sanctuaries through their appearance on the Zakro rhyton and from the number of votive figurines of goats and agrimia recovered from peak sanctuary sites. [27] Considering agrimia in these contexts, representations of women carrying goats become readable as possible references to sacrifice, [28] or as depictions indicating a (protective?) relationship between the female figures and agrimia.

In *Table 1*, Minoan rings, seals and seal impressions which include architecture have been charted for the presence of the five criteria. I would now like to examine one group of associated representations to show how recurrent association can help reveal meaning.

Test Case: stepped, openwork platforms

A stepped, openwork platform appears on a number of Minoan glyptic representations. This structure is found on seal impressions from Knossos, Zakro, Ayia Triada and Khania. One of the Khania seal impressions shows a woman seated on the platform feeding a goat *(Fig. 4,5)*. Although she touches her shoulder with one hand, the fourth gesture under

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26 Terracotta models of circular dances have been recovered from Early Minoan tholos tombs, for instance at Kamilari. See D. Levi, ASAtene (1962) Fig. 174. Keith Branigan believes the paved areas in front of these tombs may have been used for circular dances. The Tombs of Mesara: A Study of Funerary Architecture and Ritual in Southern Crete, 2800–1700 B.C. (1970) 132ff., esp. 135; id., The Foundations of Palatial Crete (1970) 94. 110. 123.

27 A.A.D. Peatfield, OpAth 18, 1990, 120.

28 For a detailed discussion of Minoan sacrificial rites see I. Sakellarakis, PZ 45, 1970, 135ff.

Criterion Five, one might still be tempted to see in the representation a charming agrarian scene. Examination of related depictions shows that the character of this scene is quite different.

Representations of the stepped, openwork platform form a distinct group, by virtue of a few shared characteristics. In each of the examples shown in *Fig. 4*, a female figure is seated on the top level of the platform. She is always shown in a pair of loose pants or a flounced, split skirt that falls to mid-calf. In the seal impressions from Knossos and Zakro *(Figs. 4,1. 4,4)*, the seated woman is being presented with something – in the case of the Knossos sealing, a large rhyton. From her position and the attention accorded her, it is clear that the seated figure is a personage of some importance. The seated woman on one of the Khania impressions *(Fig. 4,2)* is also the object of presentation; the small female figure in the bell-skirt hands her a sceptre. The seated woman holds her hand to her breast, as do the women on the Knossos and Zakro impressions, indicating that this gesture may be linked with the receiving of gifts.

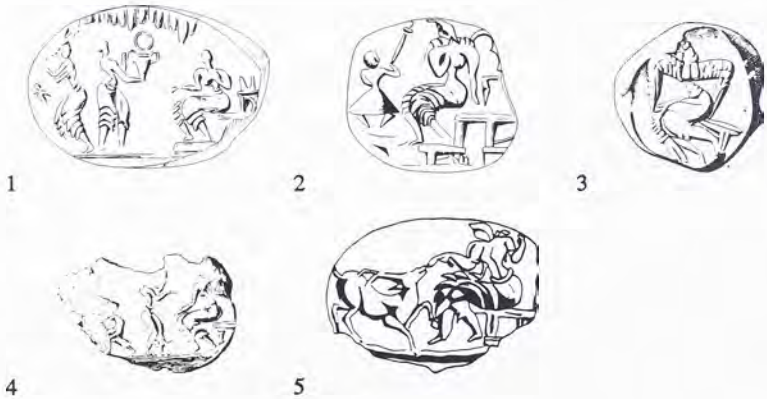

Fig. 4 Minoan seals and sealings: woman seated on stepped, openwork platforms.

The gestures and activities in these scenes suggest they may take place in the realm of cult. The representation on the sealing from Ayia Triada *(Fig. 4,3)* verifies it. The basic elements of the other four scenes are present: a female figure in the correct pose and dress is seated on a stepped, openwork platform. But this figure is obviously not human. She is winged and has the head of a bird. She is clearly otherworldly. The representations of female figures seated on openwork platforms are morphologically very close to the representation on the Ayia Triada sealing; they clearly belong to the same stock image. The representation on the Ayia Triada sealing, identified as cultic under Criterion Two (the presence of fantastic or hybrid creatures) brings the other representations into the realm of cult by virtue of association. The seated women in the representations, by this reasoning and by their apparent

interchangeability with the creature on the Ayia Triada sealing, can also be considered to belong to an otherworldly realm, probably as deities. [29]

Identification of Buildings Represented

The presence of one or more of the five criteria in the scenes examined here supports the identification of cult scenes, and therefore, buildings or parts of buildings devoted at least some of the time to the practice of cult. What, then, are these structures?

The architecture represented on seals and rings is of three basic types: columnar structures, masonry structures, and the stepped, openwork platform just discussed. In a number of cases, it appears that only part of a larger structure is represented, rather than a complete building. When a building is not shown in its entirety but extends to the edge of the scene, it would seem to indicate that it is meant to be understood as continuing beyond the pictorial field of the ring or seal. An example can be found on a seal impression from the Little Palace at Knossos *(Fig. 1,22)*. The columnar structure depicted here is fairly elaborate. Columns support an entablature with a triple cornice and a frieze of circles or 'beam-ends', the whole crowned by horns of consecration. The beam-end motif provides a clue to the building type, since it is found in frescoes and three-dimensional models where the type of building can be better determined. [30]

Three fresco fragments showing beam-ends came from the palace at Knossos: the so-called Pillar Shrine Fresco *(Fig. 5)*, [31] a fragment showing an entablature decorated with colored beam-ends and crowned by horns of consecration, [32] and a fresco fragment showing a woman standing on a balcony *(Fig. 6)*. [33] The entablature above the balcony is decorated with beam-ends painted in various colors. This fragment was recovered from the area of the Miniature Frescoes in the palace and may have formed part of the Grandstand Fresco, which is believed to represent the west side of the central court of the palace of Knossos. [34]

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29 This interpretation would support N. Marinatos' identification of the female figure in the wall painting from Xesté 3 in the West House of Akrotiri, a clear example of the type, as a goddess. Marinatos, AaR 61ff.

30 Although the beam-end motif is in many cases purely decorative, with little or no connection to the actual use of beams in Minoan architecture, there is some evidence from excavations for the existence of round beams in Minoan buildings, the ends of which may have been left exposed. In the Knossos palace, Evans found the carbonized ends of fairly small, round beams to the east side of the well of the Grand Staircase. A loggia had been located there, level with the third landing of the staircase. The carbonized beams were found above the remains of the architraves of the lower columns which had supported the floor of the loggia. Evans, PM III 300f. Fig. 195. At Phaistos, the round sockets of ceiling beams are visible in the west wall of room IL in the Protopalatial palace, J. Shaw, ASAtene 1971, 142 Fig. 74; see also 155ff. Fig. 185.

31 Immerwahr, Aegean Painting 173 No. 18d.

32 Immerwahr, Aegean Painting 173 No. 17d. This fragment was originally wrongly restored over the central section of the tripartite structure depicted in the Grandstand Fresco (Shaw [supra n. 30] 430 n. 6).

33 Immerwahr, Aegean Painting 173 No. 17a.

34 Immerwahr, Aegean Painting 65; E. Davis in: *Hägg – Marinatos, FMP* 157ff; Shaw (supra n. 30) 430f.; Evans, PM II 796ff.

The beam-ends represented in the Pillar Fresco are painted on an entablature above columnar openings or niches. Beneath the openings are walls with decorative paneling, and horns of consecration crown the entablature. The building depicted in the fresco had at least two stories and was richly decorated, suggesting palatial architecture. As with the Grandstand Fresco and the Sacred Grove and Dance Fresco, it probably depicts a part of the Knossos palace.

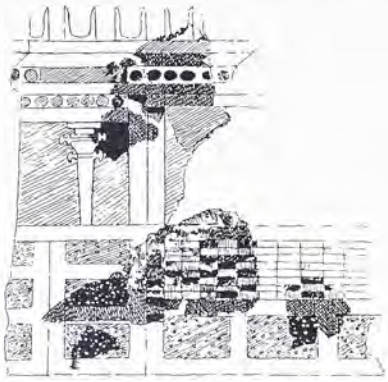

Fig. 5 Knossos 'Pillar Shrine' fresco

Fig. 6 Knossos fresco fragment: woman on a balcony

Further evidence on beam-ends comes from terracotta models from Arkhanes and the Loomweight Basement Deposit from the palace of Knossos. The column in the half-open room of the Arkhanes model, which A. Lembessi identifies as a light-well, carries two round beams whose red-painted ends were left exposed, and the balcony on the upper floor is supported by four round beams, [35] their ends again painted red. Based on the types of rooms and their arrangement (vestibule, stairway, light-well, forehall, hall) the Arkhanes model can be identified as a Type 1 or 2 villa according to McEnroe's classifications, [36] which are typologically closely related to the palaces.

The Loomweight Basement models include the model of three columns supporting two horizontal round beams, their ends painted red, [37] and three-sided models of checkerboard masonry walls with projecting cornices and beam-end decoration. [38]

In a forthcoming article, Rebecca Mersereau has identified a number of other round, wooden beams in this deposit, most with red-painted ends. [39] Based on her new examination

35 A. Lembessi, AEphem 1976 Pl. 9a–b.

36 J. McEnroe, AJA 86, 1982, 3ff.

37 Evans, PM I Fig. 166F; C. Zervos, L'art de la Crète néolithique et minoenne (1956) Fig. 385.

38 Evans, PM I Fig. 166F; Zervos (supra n. 37) Fig. 383.

39 R. Mersereau, "The Nature and Context of the Architectural Model(s) from the Loomweight Basement Deposit at Knossos", BSA fortcoming.

of the Loomweight Basement models, Mersereau has determined that these beams and all the other terracotta pieces from the basement made up a single building of palatial character.

Round beam-ends are thus found in painted and three-dimensional representations of palaces and villas. If one looks at the depictions of peak sanctuaries on the Zakro Rhyton *(Fig. 7)* and a stone vessel fragment from Gypsades *(Fig. 8)*, beam-ends are conspicuously missing. This is probably because, as Joe Shaw suggested, the peak sanctuary structures were not buildings to be entered, but rather facades which formed a backdrop for ritual activity performed in open courtyards. In a structure lacking depth, the beam-end motif, if it was indeed based on architectural elements, would make no sense.

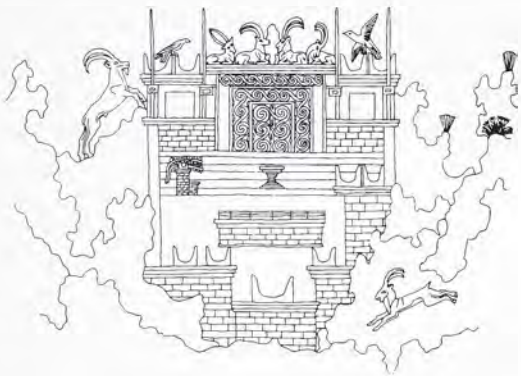

Fig. 7 Stone rhyton from Kato Zakros

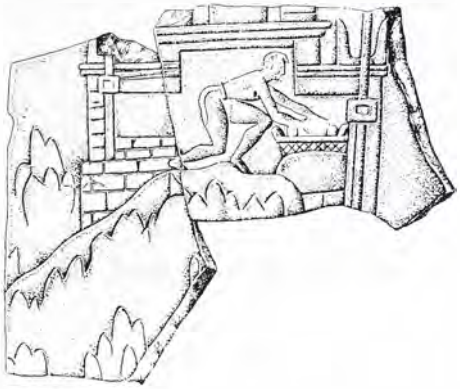

Fig. 8 Stone rhyton fragment from Gypsades.

The existing iconographic evidence on beam-ends suggests, then, that the building represented on the seal impression from the Little Palace is a palace or villa. The intentional inclusion of this decorative element in painted and terracotta representations of villas and palaces indicates that it was one of the identifying features of such structures. It would then be appropriate for a Minoan artist or craftsman to use beam-ends to indicate that the abbreviated structure on the Knossos seal impression was a palace or villa. Similarly, columns, typical of palaces or villas, are included in these representations as an identifying element.

Again using the method of identification by association, we can expect representations of the same syntax as the Little Palace sealing to depict a palace or villa. Such representations would show a person presenting the raised arm salute as they approach a columnar built structure with a beam-end frieze, cornices and horns of consecration.

Fig. 9 shows examples of glyptic representations of buildings related to the one on the Little Palace seal impression. One very fragmentary example from Knossos *(Fig. 9,4)* is published only in the form of a rudimentary sketch, but it is the only other representation showing a beam-end frieze. The other representations — from Knossos *(Figs. 9,1–2.*

9,4–5), Ayia Triada *(Fig. 9,3)* and Zakro *(Fig. 9,6)* – show columnar buildings with cornices and horns of consecration. The Zakro sealing shares with the Little Palace seal impression the additional presence of an altar crowned by horns of consecration.

Fig. 9 Minoan seals and sealings: columnar buildings.

The Mother-on-the-Mountain sealing and the seal impression from Zakro show two-level structures. The columns are on the upper level, according well with the arrangement on the Knossos Pillar Fresco. These more complex, two-story structures are also most readily explicable as palaces or villas rather than shrines. Because they share a number of characteristics with the Little Palace seal impression, this identification is strengthened. It should not be surprising to find ritual activity shown in proximity to the palace, for the central and west courts and the theatral areas of the palaces were sites of major festivals and rituals. There is evidence that the exterior courtyards of villas were used in the same way. [40]

In addition to the palace or villa, another building likely to be represented in the rings and sealings examined here is the Minoan shrine or peak sanctuary. Using the Zakro Sanctuary Rhyton as a model, certain features can be expected to be present in glyptic representations of peak sanctuaries. These are: masonry walls, horns of consecration, tapered posts with rectangular fixtures, tripartite facades, altars and enclosed courtyards.

The gold ring from Arkhanes *(Fig. 1,2)* shows a tripartite structure on top of a masonry wall or terrace. The tripartite structure, although much abbreviated, compares well to the tripartite facade of the peak sanctuary on the Zakro Rhyton, down to the projecting cornices and the squiggle on the central part of the facade, which may be a rough indication of a spiral frieze. The masonry supporting wall may be interpreted as either a terrace wall or an

40 At Nirou Khani, for example, in the exterior courtyard there is a walkway running alongside the facade of the house. G. Cadogan, Palaces of Minoan Crete (1976) 138f. Fig. 14; Evans, PM II 279ff.; AEphem 1922, 1ff.

enclosure wall, both of which are attested on peak sanctuary sites. [41] The tripartite structure on the ring sits to one side of a paved area (courtyard?), another element which compares well with the peak sanctuary on the Zakro Rhyton, although there the courtyard is unpaved.

The tree shown on top of the structure on the Arkhanes ring appears on another probable representation of a peak sanctuary – the building on the Knossos Epiphany Ring *(Fig. 1,1)*. Again, a masonry structure with a projecting cornice is depicted to one side of a paved courtyard. In this case the structure lacks a tripartite format but has an opening or niche containing a columnar lampstand. This niche can be compared to the shallow niches of the structure on the Zakro rhyton, which can be seen reconstructed in the perspective drawing of the sanctuary published by Shaw, reproduced here in *Fig. 10*. An upward tapering post stands in the paved court to one side, or in front of, the structure on the ring. Since only one type of tapering post is known in Minoan iconography, what Alexiou and Graham have identified as a bracketed flagpost, [42] this must be such a post. The best examples of these posts are depicted standing in front of the tripartite facade of the peak sanctuary on the Zakro Rhyton.

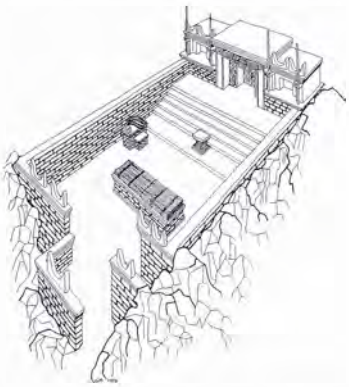

Fig. 10 Conjectural perspective drawing of peak sanctuary shrine on Zakro rhyton, by J.W. Shaw and G. Bianco.

Trees are shown on top of the shrines on the Epiphany and Arkhanes rings *(Figs. 1,1. 1,2)*. Trees also appear on the structures on rings from Gypsades *(Fig. 1,4)*, Isopata *(Fig. 1,11)*, Mochlos *(Fig. 1,6)* and Kalyvia *(Fig. 1,8)*, on a lentoid from Ligortino *(Fig. 1,25)*, and on seal impressions from Khania *(Figs. 1,12. 1,23)*, Ayia Triada *(Fig. 1,14. 1,26)*, and Zakro *(Fig. 1,20)*. Based on analogy with the Arkhanes and Epiphany Rings, can the method of identification by association be stretched to interpret all of these as depictions of peak sanctuary shrines? I do not believe so. There are significant variations in some of the

[41] B. Rutkowski, Aegaeum 2, 1988, 1ff.; A. Peatfield, BSA 78, 1983, 273ff.; A. Karetsou in: Hägg – Marinatos, SC 137ff.

[42] S. Alexiou, KretChron 17, 1963, 346ff.; id., AAA 2, 1969, 84ff.; J.W. Graham, AJA 74, 1970, 231ff.

scenes. For example, a two story structure on a seal impression from Khania *(Fig. 1,23)* can be compared to the two story palatial structures on the Knossos and Zakro sealings, but here it is topped by a tree as well as by horns of consecration, the latter seemingly common to both palace and shrine. The tree-topped building on the seal impression from Ayia Triada *(Fig. 1,26)* appears to be columnar in the published drawings, again like the palatial buildings rather than shrines. The Ligortino seal *(Fig. 1,25)* shows a masonry building decorated with festoons, horns of consecration and a tree. Some of these elements are typical of representations of palaces, some of shrines, and some of both. Examination of the variations in these scenes will lead us to more certain identifications of building type and to a clearer understanding of the building blocks and syntax of Minoan iconography.

Concluding Remarks

It may be useful at this point to ask how these representations fit within the larger context of Minoan archaeology. The inclusion of architecture in representations makes them site-specific, indicating a desire to pinpoint the locale of a particular activity. In the case of the representations examined here, ritual and cult practices have been placed in the courtyards of shrines and of palaces or villas. The representations, when their archaeological provenance is known, come from palatial or villa contexts and date to the Neopalatial period, suggesting a particularly close connection between palace and cult during this period.

This connection has already been pointed out in a number of other studies. For instance, changes have been noted in the cult areas of the west courts of the palaces in the Neopalatial period, reflecting more restricted access and tighter control of cult by the palace, [43] and Alan Peatfield has pointed out that during the Neopalatial period, shrine buildings were erected at those peak sanctuaries serving the palaces and villas. [44] At the same time, objects and offerings typical of palace goods were discarded at peak sanctuaries. The representations examined here provide confirmation, in the realm of iconography, for the close relationship between palace and cult during the Neopalatial period and raise questions about the impetus behind the sudden appearance of this iconography at a time when Minoan Crete exhibited numerous changes from the preceding period.

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43 G. Gesell in: Hägg – Marinatos, FMP 123ff.

44 A. Peatfield in: Hägg – Marinatos, FMP 92; id., OpAth 18, 1990, 117ff., esp. 126ff.

Object	Fig.	Extrahuman acts	Fantastic beings	Altars	Cult objects	Formal activities and gestures
Epiphany Ring,	1,1	'Ephipany'			ToB	Raised bent arm, commanding gesture
Gypsades Ring	1,4				HC, ToB	Hand to shoulder
Sellopoulo Ring	1,5				FlM	Boulder hugging
Arkhanes Ring	1,2				ToB, FM	Boulder hugging, tree pull, hand to shoulder
Isopata Ring	1,11				HC, ToB	Dance
Mochlos Ring	1,6			Stepped	ToA, FM	Raised bent arm
Kalyvia Ring	1,10		Standing jackal		FM	Raised bent arm
Kalyvia Ring	1,8				ToB	Boulder hugging, tree pulling
Ligortino Seal	1,25				HC, ToB, Fst	Raised bent arm
Makrygialos Seal	1,9				HC(?)	Raised bent arm
Knossos Sealing	1,3				HC	Votive gesture, commanding gesture
Knossos Sealing	1,22			Rectangular	HC	Raised bent arm
Knossos Sealing	1,16				HC	Votive gesture
Knossos Sealing	1,21				HC, Rh	Presentation
Triada Sealing	1,15		Winged woman			
Triada Sealing	1,7				SK	Procession
Triada Sealing	1,19				HC, Fst	Raised bent arm
Triada Sealing	1,26				ToB	Hand to shoulder
Triada Sealing	1,14				ToB	Arms akimbo
Zakro Sealing	1,20	'Epiphany'		Stepped	HC, ToB	Arms akimbo
Zakro Sealing	1,24					Presentation
Zakro Sealing	1,13					Woman carrying agrimi
Khania Sealing	1,12			Rectangular	HC, ToB or ToA	Dance
Khania Sealing	1,23				HC, ToB	Hand to shoulder
Khania Sealing	1,18					Presentation
Khania Sealing	1,17					Hand to shoulder

Table 1 FM= Floating Motifs; Fst = Festoon; HC = Horns of Consecration; Rh = Rhyton; SK = Sacral Knot; ToA = Tree on Altar; ToB = Tree on Building;

FRONTAL FACE AND THE SYMBOLISM OF DEATH IN AEGEAN GLYPTIC

LYVIA MORGAN

In ancient art the convention of frontal face as applied to human and animal figures is relatively unusual; profile is the norm. When it is used, however, it has specific connotations, alluding in many cases to liminal states of consciousness. In Egypt it is associated with birth, [1] with music [2] and on occasion with death. [3] In Mesopotamia, it is sometimes associated with sex and birth, [4] but more frequently it is applied to a naked 'hero', a bull-man, and the lion [5] — creatures of contest and perpetrators of death — such ideas

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* Source of illustrations: *Fig. 1:* Evans, PM I 704 Fig. 527d; *Fig. 19:* M. Gill in: CMS Beih. 0, 36 Fig. 1; *Fig. 20:* C. Long, The Ayia Triada Sarcophagus, SIMA 41 (1974) Pl. 31 (detail); *Fig. 21:* M. Bietak, Egyptian Archaeology 2, 1992, 27. Remaining photographs from the archives of CMS.

1 In the protective figure of Bes (G. Hart, A Dictionary of Egyptian Gods and Goddesses [1986] 58ff.).

2 As in the deities Hathor and Bes (Hart, Dictionary, 60f. 80f.; L. Manniche, Music and Musicians in Ancient Egypt [1991] Bes: Fig. 32 Pl. 7; Hathor-head sistrum: Pl. 11); also the banquet scene with dancers and musicians in the New Kingdom tomb of Nebamun, whose fragments are in the British Museum (T.G.H. James, Egyptian Painting [1985] 29 Pl. 27 and colour cover).

3 E.g. the drowned souls in the tenth hour of the Amduat (Book of the Underworld) in the tomb of Amenophis II (E. Hornung, The Valley of the Kings. Horizon of Eternity [1990] Pl. 99). Frontality is not, however, a common attribute of death in Egyptian iconography.

4 The goddess Inana (Sumerian)/Istar (Babylonian), goddess of sex and war, is often shown full-frontal, as is a nude female who appears on sealstones and plaques from the early 2nd millennium and whose function is thought to be to promote fertility (J. Black – A. Green, Gods, Demons and Symbols of Ancient Mesopotamia. An Illustrated Dictionary [1992] 144 Pl. 118. Cf. 132 Pl. 109 'Nintu?' as 'lady of birth'. Inana/Istar: 108f.). The frontal face of Inana/Istar is equally applicable to both aspects of her domain – sex (birth) and war (death). In the first millennium the Egyptian god Bes (see n. 1) makes his way into Near Eastern iconography. He is not, however, named in cuneiform texts (J. Black – A. Green op.cit. 42).

5 The naked 'hero', shown bearded, with long locks and with frontal face, is sometimes called Lahmu, a protective deity (J. Black – A. Green [supra n. 4] 115). Frankfort, Cylinder Seals 59f. 88ff. comments on the popularity of the 'hero' throughout Mesopotamian art, but adds that it is uncertain if the hero with a protective (apotropaic) role on Akkadian seals is the same as the hero struggling with animals. The bull-man is usually the companion of the 'hero', the two frequently appearing together. Either may be shown as a 'Master of Animals'– often associated with combat, therefore indicating dominance (e.g. H. Frankfort, The Art and Architecture of the Ancient Orient[4] [1970] hero: Pls. 19. 78 [with bull-men]; Collon, First Impressions, hero: 84; bull-man: 129. 317 [Cypriot, from Thebes]; both: 943 [also Pl. 54 (early and unusual) bull as 'Master of Lions'; Pl. 127, 'Mistress of Animals']). More frequently, the 'hero' and bull-man are shown (alone, with their double, or together) in combat with a lion, (e.g. Collon, First Impressions, Pls. 98–99. 954 [together]). The lion is also shown frontally, particularly as killer of prey (e.g. Collon, First Impressions, Pls. 81–83. 85. 158 [with frontal 'hero' and profile prey]).

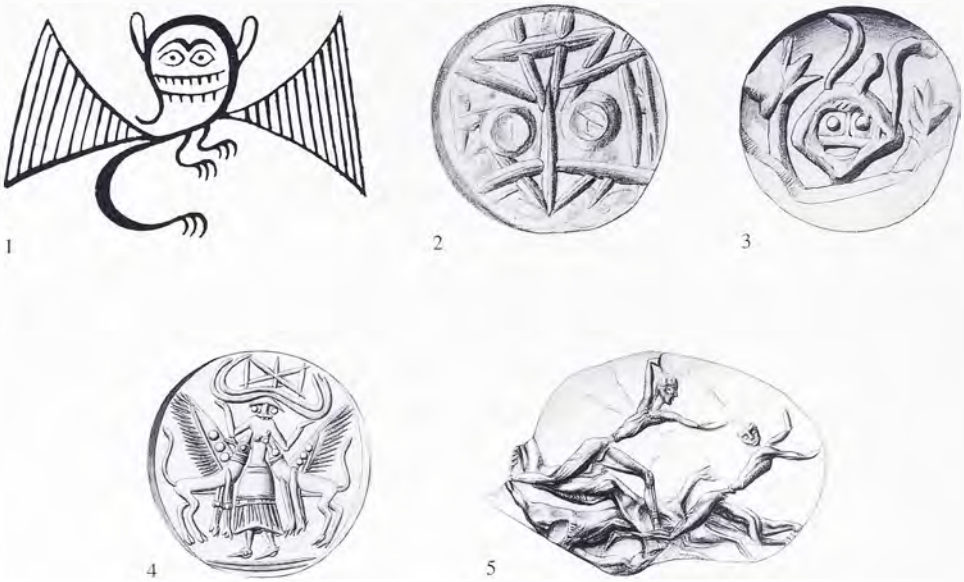

Fig. 1–5 1) MM painted pottery, Melos; 2) CMS XIII No. 94; 3) CMS II,2 No. 251; 4) CMS II,3 No. 63; 5) Sealing from Ayia Triada, HM Inv. No. 595.

reaching the Aegean through cylinder seals. [6] In Archaic and Classical Greece it is associated with the state between living and dieing, [7] with music, inebriation, and with death. [8] But what of the convention in Aegean art, where it has been largely overlooked by scholars? Do the same or similar allusions apply? In this paper I shall examine how the particular convention of frontal face is applied within Aegean glyptic scenes, in order to see what message(s) it conveyed. It is important to point out now that in most of the categories of scenes that I shall be examining frontal face is only sometimes used. However, this should

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Another creature who is shown frontal face is Humbaba, the giant opponent of Gilgamesh, whose grinning mask-like face, it has been suggested, may have been inspired by Bes and was later incorporated into early Greek representations of Medusa (Collon, First Impressions 183. 186 Pls. 855. 856 [seals]; Green and Black [supra n. 4] 106 Pl. 85 [plaque]; J. Oates, Babylon [1979] 168 Pl. 118 [clay mask-face in the form of entrails as used in divination]. The winged monster Imdugud (Sumerian)/Anzu (Akkadian) is also represented frontal face, perhaps on account of his lionine nature (Black and Green op.cit. 107f. Pl. 86).

6 E.g. CMS II,2 No. 29, Knossos (old palace, from below an MM IIIA horizon): frontal face female, bull-man, bull, lions, lion-head (prey animals in profile).

7 As in the figure of Hermes leading Persephone up from the underworld on a red-figure crater in New York (J. Boardman, Athenian Red Figure Vases. The Classical Period [1989], illus. 121).

8 See in particular: F. Frontisi-Ducroux, 'La mort en face', Metis I 2, 1986, 197ff.; and 'In the Mirror of the Mask' in: C. Berard et al., A City of Images. Iconography and Society in Ancient Greece (1989) Ch. X.

not lead us to think that application of the convention is arbitrary. Though not all instances of a particular scene use frontal face, all instances of frontal face, I suggest, carry the symbolism which is being applied.

Frontal human faces are exceedingly rare in Aegean art, and are mainly head-only, i.e. mask-like images. Isolated examples exist on sealstones and painted pottery. [9] In the MM pot from Melos shown in *Fig. 1* and on an LM IB cup rhyton from Knossos, [10] the wildness of expression and abbreviation of form suggest an apotropaic function. In these, the head is an isolated feature, without body though with attachments, and on the Melos pot an axe-like form extends beyond. A mask form within a double axe on a seal in the Philadelphia University Museum *(Fig. 2)* picks up this theme and expresses the relationship between frontal face, death and the implement of sacrifice which will be discussed later in this paper.

The convention as applied to human figures occurs on very few seals and, with the exception of *Fig. 5*, is reserved for head-only images: as an isolated mask; [11] in association with prey or sacrificial animals; [12] or with a contorted bull-man [13] (which I will refer to again later). A curious seal from Mochlos has an impish face with raised hands *(Fig. 3)*. On his head are what appear to be horns, which, if correct, would link him with the sacrificial bull, and between the horns is a phallic form, as though death and life-giving force were simultaneously attributed to the mask-like figure. The association of frontal face with birth known in Egypt through the figure of Bes, may be reflected in "the frontal-facing gorgons in childbearing pose" (Weingarten) amongst the Zakro sealings. But instances are few and the association not entirely clear. [14] The only female figure to be clearly differentiated by frontal face is a Mistress of Animals flanked by griffins on a seal from Knossos *(Fig. 4)*. She supports horns (the so-called 'snake-frame') on her head, surmounted by a double axe. Once again, these attributes characterize her association with animal sacrifice. Figures such as these on sealstones usually have a significantly reduced and therefore unreadable head, but it may be that the others too should be understood as frontal face. The 'Master of Animals' on the Aegina pendant is also frontal. [15]

A unique depiction of a fleeing man with frontal face can be seen on the drawing of a ring impression from Ayia Triada in *Fig. 5*. The human pursuer is shown in profile, the frontal face being specifically applied to the one who is about to die. In this context, we should remember the powerful effect of the gold death-masks from the Mycenae Shaft Graves,

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9 Cf. Weingarten, Zakro Master Pl. 10. The drawing from the Melos pot illustrated in this paper as Fig. 1 is one of two published in Evans, PM I 704 Fig. 527c and d. Cf. T.D. Atkinson – R.C. Bosanquet et al., Excavations at Phylakopi, JHS Suppl. Paper No. 4, 1904, Pl. XIV,6a–c.9.

10 ARepLondon 27, 1980/81, 84 Fig. 34 (= Weingarten, Zakro Master Pl. 10K, upside down).

11 CMS V No. 431 (Nichoria); Weingarten, Zakro Master Pl. 10.

12 CMS II,3 No. 115 (Kalyvia); II,3 No. 33 (Knossos) cylinder seal, face said to be 'lion'.

13 CMS X No. 145.

14 Weingarten, Zakro Master 103 (101ff. on Bes) Pl. 25: Z 44, Z 45, both birth scenes with abstracted frontal heads; Z 76, Z 78 have frontal heads but their significance is unclear; Pl. 20: Z 43, birth scene, has a profile monster's head.

15 Hood, APG Fig. 193.

Fig. 6–13 6) CMS XI No. 33; 7) CMS XI No. 272; 8) CMS XI No. 301; 9) CMS XIII No. 20; 10) CMS VII No. 159; 11) CMS XIII No. 25; 12) CMS XI No. 176; 13) CMS I No. 46.

whose impassive faces conjure the liminal state of the just deceased. [16]

Animals are more frequently characterized by frontal face, but only certain animals within definable contexts. The majority of examples date to the Late Bronze Age. Rare examples of earlier date fall into a different iconographic category since they are images from the Minoan pictographic script which therefore take their form from written prototypes rather than from

[16] Hood, APG Figs. 158. 159; Marinatos – Hirmer, CaM Pls. 163–167 (Pl. 162 shows that the masks do have a profile, but the intention was clearly that they be seen from the front and their form is essentially that of frontality).

contextual idiom. These are the cat and the owl. [17] The creatures which are dipicted symbolically with frontal face — those with which we are concerned here — are the lion and bull. It is partly their relationship as predator-prey, and more specifically their role in the sacrificial rite which entitles them to the use of this convention. It is no coincidence that it is precisely these two creatures whose heads are represented in 3-dimensions as libations vessels. [18]

In the theme of man against lion (largely a Mycenaean theme) a number of glyptic scenes use frontal face for the lion: either with one man against one lion in a battle of strength; [19] two men against a central, defeated lion *(Fig. 6)*; [20] or two man-lion duals (as in the ring in the Musee Danicourt, *Fig. 7*). [21] It is the imminent death of the lion which is expressed in the frontal face, just as it is in the fleeing man in the Ayia Triada ring impression in *Fig. 5*. To emphasize this point, slaughtered lions carried upside down like skins or carcases by a man (as on the seal now in Vienna shown in *Fig. 8*) or carried on a pole by a genius (as on a seal in Berlin) [22] are also depicted frontally. Here, it is not just the face but the upper body and front legs which are twisted round to confront the spectator.

A number of seals showing a solitary lion have the beast frontal face. Several have contorted bodies, twisting round the upper part of the body, expressive of the wounded and dieing animal. [23] Some are actually wounded, spear or arrow sticking into their backs. [24]

But the most frequent occurence of frontal face for the lion is in its role as predator (and this applies not only to seals but also to Mycenaean ivories). [25] Two lions attack a central beast *(Fig. 9)*, or, more commonly, a single lion or lioness lunges into the attack, twisting neck, shoulders and head to face the spectator *(Fig. 10)*. [26] The prey is most often bovine. It is a curious fact that in animal hunts (rather than man-animal hunts) it is not the dieing prey but the attacking predator that is depicted frontally. In other words it is again the lion to whom the convention is applied. This is a function of the symbolism of the lion as a

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17 Cat: Hood, APG Fig. 214; CMS VII No. 45c (identified as a lion); schematized head: CMS I No. 423; II,2 No. 3; II,2 No. 282; IV No. 132a; VIII No. 34; X No. 280; XII No. 100. Owl: CMS II,5 No. 311 (Phaestos) curiously shown with ram's (?) horns. Evans, SM I 209 sign 75 (cat) (cf. 74); 210 sign 78 (owl). It should be noted that the bucranium or animal head (discussed below) also appears as signs in the pictographic script: 196 sign 38; 206f. sign 63 (bull), and 207f. sign 67 (sheep).

18 Lion: Marinatos – Hirmer, CaM Pls. 99 (Knossos). 176 (Mycenae); S. Marinatos, Excavations at Thera II (1969) Pl. 37,1; V Pl. 80. Bull: Marinatos – Hirmer, CaM Pls. 98 (Knossos). 175 (Mycenae).

19 CMS I No. 9 (Shaft Grave III); or man fleeing: CMS I No. 359 (Pylos).

20 Cf. CMS I No. 331, Pylos; I No. 224 (Vapheio), lion contorted and tied up.

21 Cf. CMS I Suppl. No. 173; I No. 307 (Pylos sealings); the compositional form is remarkably similar in all three.

22 CMS XI No. 37.

23 CMS I Nos. 43. 84 (Mycenae). 508 (Crete).

24 CMS I No. 248 (Vapheio); I Suppl. Nos. 80. 81 (Crete).

25 E.g. J.-C. Poursat, Catalogue des Ivoires Myceniens du Musee National D'Athens, Paris 1977, Pls. L 453 and 454 (= Hood, APG 122e: Spata); Hood, APG Fig. 112 (Athens); J.-C. Poursat, Les Ivoires Myceniens, Paris 1977, Pl. V,5 (Thebes).

26 Cf. CMS XI No. 170.

perpetrator of death [27] and, on occasion, sacrificial officiant [28] (equivalent in the animal world to the human hunter or the priest); as an apotropaic guardian; [29] and (in both capacities) as an earthly infiltrator into the liminal zone through association with the deity (a role which will be considered below).

In scenes of animal hunts, the prey — which is usually though not exclusively bull — is shown in profile head. Only very few examples show full-face prey: all are bull. The animal is hunted by a lion, [30] by a griffin, [31] or by both. [32]

The close relationship between the predator-prey is expressed in the seal in the Boston Museum shown in *Fig. 11*, where confronting lion and bull are joined at the head, which is bull and is again frontal; and in a seal impression from Pylos in which two animals are joined in a single body, goat-head and legs one end and lion head and legs the other (the goat-head being frontal). [33] The element of death is more specifically expressed in a seal in the Ashmolean Museum which shows two frontal-faced lions joined at the waist beneath which is a bucranium and above which is a figure-of-eight shield; [34] and especially in the seal in Munich shown in *Fig. 12*, in which the central frontal head is an animal skull, framed by the necks of heraldic lions whose feet rest on a sacrificial altar. In the seal from Mycenae in *Fig. 13* it is the heraldic lions' heads which join to stare out at the spectator. Again they rest their paws on an altar. The image expresses the potency of the lion as a perpetrator of death and specifically links the beast with the sacrificial rite through the placement of the altar. The same message is conveyed in another seal from Mycenae with griffins [35] (who frequently have an interchangeable role with lions in Aegean iconography) [36] and the so-called 'impaled triangle', a probable weapon-symbol which, like the altar, has clear sacrificial connotations. [37] This theme is best known from the Lion Gate at Mycenae. There each animal rests its paws on an altar, between which is a column surmounted by an entablature of beam-ends symbolic of a palatial shrine. [38] From the positions of their necks it is clear that the now-missing heads were turned frontally to confront the visitors as they approached the entrance to the palatial ancient. Their association with the deity/ies is expressed by the altar

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27 See esp. L. Morgan in: Klados. Essays in Honour of Professor J.N. Coldstream. Institute of Classical Studies, BICS Suppl. 63, 1994 forthcoming; N. Marinatos in: Hägg – Nordquist, Celebrations 143ff.; J. Weingarten in: CMS Beih. 3, 299ff. (302–305). Consider, in terms of frontal face, the lions gripping a sword on a hilt from Shaft Grave circle B: Hood, APG Fig. 173.

28 Marinatos, MSR 43. 45.

29 Morgan, MWPT 45f.

30 CMS XI No. 43; V,2 No. 602 (Mycenae); I No. 70 (Mycenae) with plant.

31 CMS XI No. 46; Kenna, CS No. 342 Pl. 13.

32 CMS VII No. 116 (lion and bull both frontal face).

33 CMS I No. 381.

34 Kenna, CS No. 336 Pl. 13.

35 CMS I No. 73.

36 See Morgan, MWPT 52ff.

37 As discussed by Marinatos, MSR 61ff.

38 Illus.: Hood, APG 101 Fig. 82; Marinatos – Hirmer, CaM Pl. 141. On beam-ends see Morgan, MWPT 74ff.

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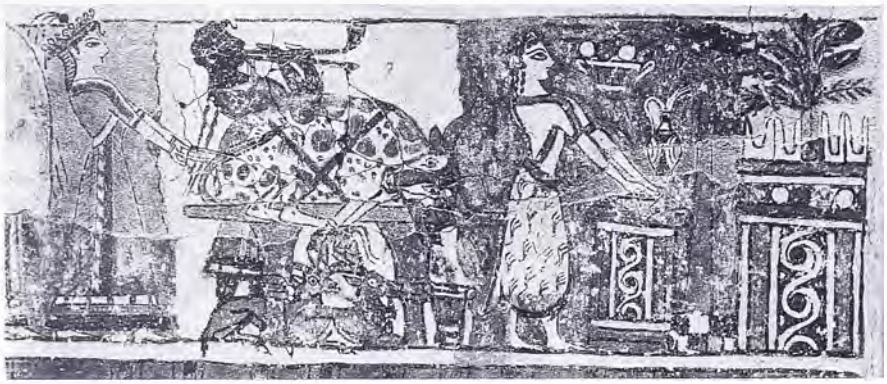
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Fig. 14–20 14) CMS VIII No. 141; 15) CMS I No. 203; 16) CMS I No. 18; 17) CMS II,4 No. 158; 18) CMS II,3 No. 338; 19) Composite drawing of a sealing from Knossos; 20) Detail from the Ayia Triada sarcophagus.

and beam-ends and their posture intimates their function as apotropaic creatures who ward off evil, while alluding to their symbolic association with death and sacrifice.

It is with the bull that the sacrificial element in the iconography of death becomes explicit. [39] There are relatively few extant examples of frontal-face bull where the whole animal is shown, but there are large numbers of examples of the bucranium or head of the

[39] On bull-sacrifice see in particular J.A. Sakellarakis, PZ 45, 1970, 135ff.; Marinatos, MSR.

sacrificed animal. In both, sacrificial adjuncts are added to the scenes. These function like hieroglyphic determinatives, establishing for the viewer the symbolic significance of the image.

The seal from Gournia in *Fig. 17* joins two heraldic bulls into a single frontal head, above which is a figure-of-eight shield. [40] In a seal in New York the sacrificial double axe surmounts the head of each of the two bulls and between them lies a pictograph expressing the same idea. [41] On other seals the double axe appears above the bull's head without body *(Fig. 28)*; [42] and on a sealing in the Heraklion Museum an 'impaled triangle' is placed between the horns of the bucranium. [43]

Two seals — the one in *Fig. 14* in a private collection and one from Kalyvia [44] — show a contorted, in other words dieing, bull with a hitherto unidentified symbol of three small circles. The pictorial equivalent of these in life eludes me (I wonder if they are related to the misnamed 'beam ends' which signify a shrine) but that they are sacrificial symbols is shown by the seal in *Fig. 15* from Naplion where the trussed bull lies on an altar, and from the ring from Mycenae in *Fig. 16* on which two rows of alternating lion/bull heads in frontal face are divided by a row of the same small circles.

The trussed-bull image in *Fig. 15* is best known from the Ayia Triada sarcophagus *(Fig. 20)*, on which the convention of frontal face is again applied to the slaughtered bull, as it is in the seal in the Iraklion Museum shown in *Fig. 18* on which an 'impaled triangle', indicative of a weapon, lies in the field above the slaughtered bull, while the skull of another victim lies beneath the altar. In a seal now in Berlin, the sacrificed goat is shown in profile, but the legs of the altar are formed of stylized bucrania. [45] That theme is picked up in the sealing from Knossos (the drawing of which was made by Margaret Gill from two fragments) shown in *Fig. 19*. [46] Above are two frontal-face bulls, shown to be sacrificial by the bucrania below the platform as well as by the bent palm tree, also included in the Berlin seal, where the dagger at the neck of the beast leaves no room for doubt as to interpretation. Nanno Marinatos has shown that the palm tree has the iconographic function of marking a sacred spot, particularly in relation to sacrifice. [47] Added to this is the fact that on both these seals the palm tree is bent towards the head of the sacrificial animal. I do not believe this is because it follows the curve of the sealstone, as some might wish to argue, since it would be quite within the bounds of convention to place the tree upright, rising from behind the beast's back. Rather, I would suggest that the bent tree alludes to the desired presence of the deity for whom the sacrifice is intended. In cult scenes of the so-called 'shaking of the tree',

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40 On the figure-of-eight shield as a sacrificial symbol see: Marinatos, MSR 52ff. The joined head is repeated in CMS XI No. 249, here in the centre of a circle of 3 bulls.

41 CMS XII No. 250; cf. CMS II,3 No. 310 ('Sitia').

42 Cf. CMS II,3 No. 11; XIII No. 15.

43 Marinatos, MSR 62 Fig. 52.

44 CMS II,3 No. 101.

45 CMS XI No. 52.

46 M. Gill in: CMS Beih. 0, 36 Fig. 1; the top fragment is illustrated in CMS I No. 515.

47 N. Marinatos, OpAth 15, 1984, 115ff. See also ead. in: CMS Beih. 3, 127ff.

interpreted as an act which induces the epiphany, [48] the tree is actually bent, in other words pulled forward, rather than shaken *(see Fig. 32)*.

Before returning to the presence of the deity — with which I shall end this paper — let us consider two other contexts in which the frontal face occurs: that of bull-sports and that of the man-beast or so-called 'minotaur'. The two are related.

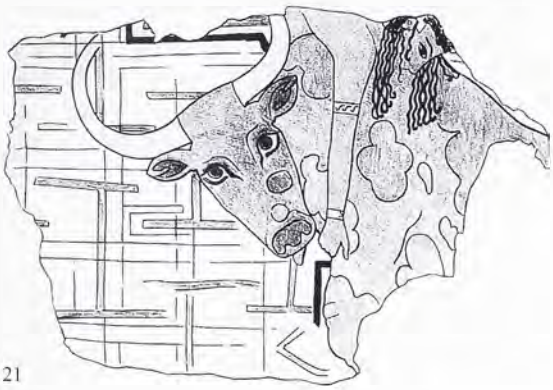

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Fig. 21–23 21) Drawing of a Minoan wall painting fragment from Tell el Dab'a, Egypt; 22) CMS II,4 No. 157; 23) CMS XII No. 245.

An astonishing fragment of a Minoan wall painting was recently unearthed at Tell el Dab'a (ancient Avaris, the Hyksos capital in Egypt) in the eastern Nile Delta, *(Fig. 21)*. It belongs to a group of paintings showing bull sports, processional male figure(s), landscape, and, judging from what appear to be dress fragments, large-scale female figures, and is dated by the excavator, Manfred Bietak, to the end of the Hyksos period. [49] Against a background of a labyrinth pattern is a taureador vaulting over the back of a bull whose frontal face dominates the picture. From the position of what remains of the front leg, it looks as though it was bent. His tongue lolls from his mouth. These are all, I believe, signs alluding to the

48 Most recently: Marinatos, MR 185ff.

49 M. Bietak, Egyptian Archaeology 2, 1992, 26ff. Id., Ägypten und Levante 4, 1994, 44ff. Pls. 14–22. The paintings were the topic of discussion at a Colloquium at the British Museum in July 1994 (proceedings forthcoming) and at a conference in Vienna in September 1994 (Ägypten und Levante forthcoming).

sacrificial role of the bull in Aegean religion. Though not an aspect of bull sports in paintings found in the Aegean, this frontal face does occur on some sealstones, as on that from Gournes shown in *Fig. 22.* [50] On all examples the front knees are bent, collapsing beneath the animal in an imminent fall. On one, in the Ashmolean Museum, the sacrificial symbol of the figure-of-eight is placed next to the bull's head. [51] In the case of the Tell el Dab'a painting, it is unlikely that the sport depicted was actually practised in Egypt. Rather the scene alludes to a ritual activity which occurred at the palace of Knossos, itself suggested by the labyrinthine pattern. If, as seems to be the case, the paintings decorated a Minoan shrine abroad, what would have been required locally as an offering to the deity is the sacrificial ritual. The use of the frontal face therefore alludes to sacrifice, a probable function of the bull-sports where the ritual killing of a bull is likely to have occured after the show.

A frequent form of the bull-man — or 'minotaur' — is in a contorted, acrobatic pose, the man's legs swinging up and away from the bull's torso, or the bull's head contorted down from his body and the whole form twisted at the waist so that the man's legs swing round to drop down behind. In both cases the inspiration for the form is surely derived from the bull sports — the frontal part from the bull, the back part from the acrobat *(cf. Fig. 22).* [52] This reference to the bull-sports is evident in the seal in *Fig. 23*, now in New York, and the frontal head recalls the sacrificial bucranium.

Some examples of beast-man have frontal face [53] and one (in a private collection in Basel) has the disembodied frontal head of a man adjacent. [54] The majority of beast-men (outside the multifarious monsters of the Zakro Master) [55] are a combination of bull and man, though goat or deer are occasionally combined, either with man or with lion. [56] Sometimes the monster has two animal top-halves with one pair of human legs; [57] and in the example in *Fig. 23* two acrobatic pairs of human legs are combined with frontal face bull's head.

The specific animal-human combinations are significant. Occasionally, a lion-man is depicted, as in a seal from Mycenae where the frontal face of the beast attacking its prey is again a presentiment of death, [58] or in another seal in which a frontal-face lion-man attacks a

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50 Cf. CMS VII Nos. 108. 257; X No. 141; Kenna, CS No. 341 Pl. 13; also CMS VII No. 106 with collapsing bull but without taureador.

51 Kenna, CS No. 341 Pl. 13.

52 Discussed, with examples by L. Morgan in: CMS Beih. 3, 145ff. (151ff.).

53 I. Pini in: L. Marangou (ed.), Minoan and Greek Civilization from the Mitsotakis Collection (1992), 219 No. 294; CMS I No. 77; II,3 No. 332 and VII No. 123 (both double-headed, lion- or bull-head frontal, goat profile); CMS X No. 232; Kenna, CS No. 323 Pl. 13 (double); Marinatos – Hirmer, CaM Pl. 119 (centre) = Sakellariou, CollGiam 63 No. 379.

54 CMS X No. 145.

55 D.G. Hogarth, JHS 22, 1902, 76ff.; Weingarten, Zakro Master.

56 E.g. CMS VII No. 124 (goat–lion ?); VII No. 138 (deer-man ?).

57 CMS VII No. 123; II,3 No. 332 (both of which have one frontal head); Kenna, CS No. 323 Pl. 13; and CMS XI No. 336; VII No. 126, genius-man with two dog top halves extending from the waist (perhaps not intended as a multiple monster but as three creatures, the two dogs being 'behind').

58 CMS I No. 77.

bull-man, linking the themes of predator-prey with that of the minotaur. [59] In these examples the analogy between lion and man the hunter prevalent in Aegean (specifically Mycenaean) iconography becomes manifest in the monster.

Sacrifice is also alluded to in some beast-man images, through the symbols of figure-of-eight shield and 'impaled triangle', [60] or the star, a symbol which also occurs above the head of bucrania [61] as well as in cult scenes where it sometimes signifies the sun. [62] On a seal from the Idean cave the star appears by an altar surmounted by horns of consecration and sacred boughs. [63] On another seal, in a private collection in New York, a sacrificial head lies in the field beside the bull-man. [64] Also on that seal, like that from the Idean cave, is a plant, a regenerative motif which occurs on other examples with beast-man [65] and is a frequent glyptic symbol. It brings us to the final observations on the topic of this paper, which concern the continuum of life and death.

A leafy plant, whether a branch or a tree, has the unambiguous signification in ancient art of renewed life. In Aegean glyptic it is, on occasion, juxtaposed with scenes pertaining to death in a contrast which evokes the continuum of existence through regeneration. It occurs on either side of a bucranium; [66] below the dueling men and lions in the ring in *Fig. 7*; and in association with a prey or sacrificial animal above whose back lies a figure-of-eight shield. [67]

The gold ring from Vapheio in *Fig. 32* is of particular interest. The cult scene includes various related sub-elements which make up the theme. On one side is the ritual of 'shaking' — i.e. pulling down — the tree. It is pulled towards the central female figure who is dancing, it is assumed, either as an enactment of, or as an inducement for, an epiphany. Above her head, to which the boughs of the tree almost reach, is an object often interpreted as an insect, but which, with others, I see as a bucranium. Above the bucranium is a leafy bough. On the other side are symbols of the sacrificial rite — the double axe (above) and a figure-of-eight shield, here shown in profile. Attached to the shield is the sacred garment of the goddess.

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59 Evans, PM IV 589 Fig. 586; CMS II,3 No. 10 from Knossos, may show the same theme, though the animals are hard to recognize.

60 Both symbols: CMS XI No. 251; figure-of-eight shield: CMS I No. 216 (Prosymna); VII No. 123; IX No. 128; XII No. 238; Kenna, CS Fig. 117 No. 322; 'impaled triangle': CMS II,3 No. 67 (Knossos); XI No. 336; Kenna, CS No. 322.

61 With beast-man: CMS IX No. 128 (with figure-of-eight-shield); XI No. 336 (with 'impaled triangle'); Kenna, CS Fig. 128 No. 325. With bucrania: CMS II,3 No. 149 (Mallia); II,3 No. 289 (and plants), 'Psychro'; X No. 68; cf. the rosette on the silver bull's-head rhyton from Shaft Grave IV (Hood, APG 163 Fig. 157).

62 CMS XI No. 28; cf. Fig. 44. See also L. Goodison, Death, Women and the Sun, BICS Suppl. 53, 1989, 72ff.

63 CMS II,3 No. 7.

64 CMS XIII No. 84.

65 CMS IX No. 127; perhaps also in Fig. 23.

66 CMS XII No. 49.

67 CMS V No. 254 (Armeni). On a cylinder seal found at Tiryns (CMS I Suppl. No. 19) the image of griffin-predator subduing goat-prey is pictured above the image of goats flanking a tree of life. In the centre are two frontal-face bull men (whose form and function, however, differ from that in the Aegean, and who are outside the scope of this paper).

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Fig. 24–33 24) CMS I No. 106; 25) CMS II,3 No. 88; 26) CMS II,3 No. 122; 27) CMS I No. 54; 28) CMS XI No. 259; 29) CMS II,3 No. 8; 30) CMS VII No. 118; 31) CMS XI No. 330; 32) CMS I No. 219; 33) CMS I No. 17.

All of these sub-elements are encountered in the types of scenes we have been considering. That the frontal face bucranium takes such a central position in the scene, above the head of the priestess or goddess-impersonator, is significant. For the elements of life and death — the tree, the axe and shield — come together in the central images of bough and skull. This dimension of renewed life is perceivable in many of the scenes of death in which frontal face plays a role. A clear example is provided by the sealstone from Mycenae in *Fig. 24*, depicting a suckling lion-cub. Both cub and mother have the frontal face, while the lioness has her front legs in the twisted frontal position usually associated in this animal with the killer. To emphasise this part of the duality, an 'impaled triangle' lies behind the cub. On a seal in the Iraklion Museum a lion-cub again suckles (the creatures this time in profile) and the sacrificial elements of figure-of-eight shield and skull lie in the surrounding field. [68] The lioness's head is twisted back, as it is on the cow in the seal in *Fig. 25* from Knossos. It is the usual position of suckling scenes in Aegean art [69] and it looks as though the mother is licking the back of her young. However, it will be recalled that this very position is that adopted by the dieing animal *(Fig. 14)*, the contorted posture of the ultimate collapse, an ambiguity which surely did not go unnoticed by Aegean artists. In the Knossos seal in *Fig. 25* two waterfowl — perhaps another life-giving symbol — flank a central frontal face head above the suckling scene (bringing to mind the Master or Mistress of Animals). The frontal head, or skull, is interpreted in CMS as a human mask, but looks more lionine in the illustration. The duality of life and death is further expressed in a seal from Porti *(Fig. 26)*, which shows a lactating lion (lions and lionesses are frequently mixed in Aegean glyptic). Above the lion, facing towards the animal's back-turned head, is a bucranium or disembodied animal head; below the lion, immediately under the full teats, is a plant: death above, life below. [70] The lactating lioness is not reserved for scenes of suckling, but is also applied to scenes of immediate death. An example is a seal now in the British Museum *(Fig. 10)* where the maned lioness attacks two deer, the symbolism of her teats contrasting with the symbolism of death in her twisted frontal head and legs. [71] The same duality is apparent in a seal from Pylos on which a man attacks a lioness, who stands on her hind legs, her teats extending towards the hunter almost like daggers. [72]

One symbol relevant to this topic which we have not yet discussed is the sacred robe or skirt, sometimes referred to as the 'sacral knot'. An offering to the goddess and the central element in scenes of the robing of the priestess, the sacred garment is also associated with sacrificial symbols. It occurs not infrequently with the figure-of-eight shield and/or with the contorted bull, [73] as well as with the killer lion. [74] In the seal from Mycenae in *Fig. 27* it is

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68 CMS II,3 No. 344.

69 E.g. Marinatos – Hirmer, CaM Pl. 71 (below), Temple Repositories faience plaque.

70 In CMS V No. 304, death is below, in the form of a lion head or skull, again immediately below the lactating teats of the animal, and life is above the lioness in the form of a water-fowl.

71 Cf. CMS XIII No. 26, where the frontal-face lioness attacks a bull.

72 CMS I No. 290.

73 E.g. CMS XIII Nos. 32. 33. See esp. Marinatos, MSR Figs. 46–48. 63. 65. 66. 72 (fake?). 74.

74 E.g. CMS VII No. 125.

placed next to a lion whose frontal face stares directly at us. This association with death as well as with the goddess (which I will discuss in a moment) is accentuated in the seal in *Fig. 28*, now in Berlin. Here a double axe hovers meaningfully above the head of a bucranium on either side of which is a sacred robe. What is the significance of these associations? *Fig. 29* from Knossos, clarifies the latter. A priestess carrying the double axe in one hand and the sacred robe in the other, advances to an unseen presence on the left which must surely be the goddess. The sacrificial bull's head and the sacred robe are both offerings to the deity, but what of the association of the frontal face lion? The lion or lioness is apparently a servant of the goddess(es). It protects, averts evil, perhaps even, as in Egypt, avenges. Certainly it is instrumental in the killing of the sacrificial animal, whose ultimate destination is as an offering to the deity. That the lion also appears to be the enemy of man — as in the duel scenes — should not surprise us. Such duality is commonplace in animal symbolism. In Egypt, the lion as a solar animal symbolised death and destruction at night as well as rebirth in the morning. [75] The lioness-goddess Sakhmet, who is depicted with a woman's body and lion's head, is the avenger of the sun god Re and a vanquisher of the king's enemies. In one myth, however, her protective destruction runs away with itself when she goes on a blood-thirsty binge aimed at destroying mankind and must be stopped by the wiles of Re. [76] Like life and death, protection and destruction are inseparable.

In a seal from Armeni, a goddess, a life-giving plant behind her, intimately strokes the chin of her lion. [77] In *Fig. 30*, a seal now in the British Museum, the seated goddess is flanked by two protective lions. The lions' paws rest on her, just as they do on the altar in *Figs. 12 and 13*. Her seat is the frontal face skull or head of a lion. She is protected by the instrument of death. In *Fig. 31*, a seal in a European collection, the goddess or priestess — figure-of-eight shields and the contorted sacrificial ox as the symbols of her sacrifice beside her — actually wears the frontal face mask of the lion. In appropriating the lion-symbol she has herself become the instrument of death.

As a final comment on this symbolism, I shall turn to the Mycenae Acropolis ring, *Fig. 33*. The goddess is seated beneath a tree, from which a child — a reference to new life — picks the fruit. In front of her two women and another child bring offerings of flowers. Right in the centre of the field, directly in front of the goddess, is a double axe, clearly alluding to a sacrificial offering. Above this are symbols for the sun and the moon. Behind, in the upper part of the ring is a tiny figure wearing a figure-of-eight shield. Extending in a curved line from the figure with the shield and occupying the space behind the female offering bearers are six frontal face lion heads or skulls. Just as in the Vapheio ring, the scene is divided into the elements of life on one side and the elements of death on the other with mixed symbolism combining sacrifice and vegetation in the centre. The fruit-bearing tree and the child lie to one side which is surmounted by the sun; the lion heads/skulls and the figure-of-eight shield lie to the other side which is surmounted by the moon: life and day; death and night. The

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[75] M. Lurker, The Gods and Symbols of Ancient Egypt (1982) 77.

[76] G. Hart, A Dictionary of Egyptian Gods and Goddesses (1986) 188f.

[77] CMS V No. 253.

offerings brought to the goddess — flowers and sacrifice, represented by the double axe — take the central position and reflect that duality which is the continuum of existence.

BILDTHEMEN MIT RIND UND ZIEGE AUF DEN WEICHSTEINSIEGELN KRETAS ÜBERLEGUNGEN ZUR CHRONOLOGIE DER SPÄTMINOISCHEN GLYPTIK

WALTER MÜLLER

Aus den Bildthemen [1] der kretischen Weichsteinglyptik wurden die Darstellungen von Rind und Ziege ausgewählt, um am Beispiel der beiden häufigsten Tiermotive chronologisch relevante Stilkriterien zu erarbeiten, die eine Trennung in eine frühe und späte Phase ermöglichen. Aus Zeitgründen beschränkt sich die Untersuchung auf einzeln dargestellte Tiere und klammert die paarweise Anordnung ebenso aus wie Tierüberfälle und Säugeszenen. Da es nur wenige zuverlässige Angaben über Fundumstände und Begleitfunde der hier untersuchten Siegel gibt, die einer kritischen Beurteilung standhalten [2], muß sich die vorliegende Arbeit auf die Gruppierung von Siegeln [3] ohne Kontext um wenige chronologische Fixpunkte beschränken.

Die Unterscheidung von Rind und Ziege ist auf Siegeln nicht leicht zu treffen, denn nicht immer greifen die dem zoologisch kundigen Betrachter geläufigen Unterschiede zwischen beiden Huftiergattungen [4]. Dennoch muß davon ausgegangen werden, daß ein Siegelschneider genau wußte, ob er eine Ziege oder ein Rind darstellte, und daß die 'unbestimmten Vierfüß-

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* Außer den im Abkürzungsverzeichnis zusammengestellten Abkürzungen werden zusätzlich verwendet:
Giam Iraklion, Archäologisches Museum, Sammlung Giamalakis.
HM Iraklion, Archäologisches Museum
OAM Oxford, Ashmolean Museum
Alle Photos stammen aus den Archiven des CMS.

1 Die Definition des Begriffes sowie die Arbeitshypothese der begrenzten Laufzeit eines 'Bildthemas' wurden mit I. Pini abgestimmt (s. unten S. 193).

2 Zur Problematik von Kontext-Datierungen s. W.-D. Niemeier in: CMS Beih. 1, 91ff.; speziell für Weichsteinsiegel s. I. Pini, BICS 29, 1982, 130; J.G. Younger, Aegean Seals II, 118. Kritisch: W. Müller, Gnomon 63, 1991, 237.

3 Soweit nicht anders angegeben, sind die in der vorliegenden Untersuchung zitierten Siegel aus Serpentin oder Schiefer geschnitten. Auf die Materialangabe wird daher im Text verzichtet. Abweichungen gegenüber den Angaben in den Corpusbänden basieren auf der erneuten Begutachtung durch die Mitarbeiter des CMS und auf der Erfahrung des Verfassers. Bei den meisten Siegeln handelt es sich um Lentoide, nur abweichende Siegelformen werden eigens erwähnt.

4 Vgl. Morgan, MWPT 56 Taf. 80 (Rind); 58f. Taf. 84. 85 (Ziege). Die bisweilen praktizierte Unterscheidung in Wild- und Hausziege ist m.E. nicht sinnvoll, da Übereinstimmungen der in der Glyptik zu differenzierenden Gehörntypen mit den weit geschwungenen Hörnern von *capra aegagrus* bzw. dem kürzeren Gehörn der domestizierten Art wohl nur zufällig und nicht gewollt sind.

ler', wie sie in den Bänden des CMS allgemein beschrieben werden [5], sich nur der Bestimmung durch den heutigen Betrachter entziehen. So wurden markante Details und spezifische Posen wiedergegeben, die dem natürlichen Verhalten des betreffenden Tieres entsprechen, aber auch nur ikonographische Schemata der Glyptik sein können. Die wichtigsten Unterschiede liegen in der Wiedergabe der Hörner und des Schwanzes. Das Gehörn der meisten Rinder ist mehr oder weniger stark S-förmig geschwungen, während es bei den Ziegen in weitem Bogen gespannt ist. Oft sind die Hörner um eine Strukturierung bereichert, die eine weitere typologische Untergliederung ermöglicht. Ein einfaches, aber sehr probates Kriterium zur Unterscheidung von Rind und Ziege, auf das sich in Zweifelsfällen das Erfassungssystem der Datenbank des CMS stützt [6], ist in der Darstellung des Schwanzes vorhanden, der bis auf wenige Ausnahmen bei Rindern lang und bei Ziegen kurz ist.

RIND

Das erste und zugleich häufigste Bildthema zeigt ein Rind im Profil mit emporgehobenem, bisweilen fast in den Nacken geworfenem Kopf. Das Serpentinlentoid HM Inv. Nr. 2817 aus dem Grabungszusammenhang der Stratigraphical Museum Extension in Knossos *(Abb. 1a)* ist durch die begleitende Keramik in SM IB datiert [7]. Es ist der einzige frühe Beleg für dieses Bildthema. Die auf der Siegelfläche übereinander angeordneten Vorderbeine sind stark abgewinkelt, so daß der vordere Teil des Körpers etwas tiefer angesetzt und die hintere Partie nach oben gestreckt ist. Das Schema der abgewinkelten Beine sagt nicht eindeutig aus, ob das Tier läuft oder gelagert ist. Letztlich spricht der emporgehobene Kopf dafür, daß wohl ein laufendes Rind gemeint ist. Das knossische Lentoid läßt in guter Erhaltung – zum Teil technisch bedingte – markante Stilmerkmale erkennen, auf Grund derer einige der vielen Beispiele desselben Bildthemas um das fest datierte Stück gruppiert werden können. Der Körper des Tieres ist aus dem weichen Stein mit Schabe- und Schneide-Werkzeugen herausgearbeitet, von denen man in nahezu werkstattfrischer Erhaltung hellgraue Spuren im Intaglio sieht [8]. Unregelmäßig konturierte Einfurchungen gehen tiefer in den Stein hinein und ergeben im Abdruck erhabene Leisten, die den Körper an Hals, Brust und Lende rahmen und durch parallele Rippen strukturieren. In gleicher Manier ist das Auge durch einen Punkt wiedergeben, der von einem nicht ganz geschlossenen Kreis gerahmt ist. Auch das Maul besteht

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5 z.B. CMS V Suppl. 1B S. XLV s.v. »Vierfüßler, unbestimmt«.

6 in Vorbereitung: W. Müller – I. Pini – St. Wildt, Sphraghis. Datenbanksystem zu den Ägäischen Siegeln der Bronzezeit. Allgemein zur Unterscheidung von Rind und Ziege: I. Pini, CMS II,3 S. XXXVIIf.

7 P. Warren, ARepLondon 1980/81, 81 Abb. 19a.b.; I. Pini, CMS II,4 S. XXXI. XLVII.

8 Im Kontrast hierzu stehen die fein modellierten glatten Flächen von Hartsteinsiegeln, wie z.B. die des Karneollentoids CMS I Nr. 8 aus Grab P des Gräberrundes B von Mykene mit dem gleichen Bildthema wie HM Inv. Nr. 2817. Gelenke, Maul und Auge sind mit dem Punktbohrer ausgeführt, die Ränder der mit dem Rade gravierten Linien scharfkantig und exakt.

Abb. 1a–i Gelagerte bzw. laufende Rinder, SM I. a) HM Inv. Nr. 2817; b) CMS II,4 Nr. 199; c) CMS II,3 Nr. 174; d) CMS IV Nr. 305; e) CMS X Nr. 297; f) CMS XI Nr. 348; g) Giam Inv. Nr. 3219; h) Giam Inv. Nr. 3134; i) Giam Inv. Nr. 3100.

aus Bogenlinie und Punkt. Die unregelmäßig S-förmigen Hörner, der über den hinteren Schenkel gelegte Schwanz und die einsträngigen Beine sind in gleicher Weise wiedergegeben wie die rahmenden und untergliedernden Leisten [9]. I. Pini hat auf diesen 'Leistenstil' hinge-

9 Ein weiteres Beispiel mit fächerförmigem Pflanzenmotiv, HM Inv. Nr. 2299 aus der Phourni-Nekropole von Archanes (Younger, Aegean Seals II, 124), dürfte aus derselben Werkstatt stammen wie CMS II,3 Nr. 174.

wiesen und eine Gruppe von Rindern und Ziegen mit den hier beschriebenen frühen Stilmerkmalen aufgelistet [10]. Bei den in einer Auswahl aus Pinis Gruppe zusammengestellten Rindern *(Abb. 1)* sind Rippen über den Körper gelegt, während eine Konturleiste von der Brust bis zum Unterkiefer verläuft. Das Auge besteht aus einem dicken Punkt, der von einem Kreis bzw. Teilkreis gerahmt ist, die Spitze des Mauls ist durch einen kleineren handgravierten Punkt wiedergegeben. Die Querrippung des Halses auf CMS II,4 Nr. 199 *(Abb. 1b)* muß als individuelle Variante des 'Leistenstils' gewertet werden, die bei Ziegen der gleichen Stilstufe häufiger anzutreffen ist [11]. Auch die beiden im Vergleich zu den anderen Rindern behäbig erscheinenden Tiere auf CMS IV Nr. 305 *(Abb. 1d)* und CMS X Nr. 297 *(Abb. 1e)*, die durch die Fülle ihres massigen Körpers auffallen, stehen in derselben stilistischen Auffassung wie das Lentoid der Stratigraphical Museum Extension *(Abb. 1a)* und sind zeitgleich anzusetzen. Die fächerartigen Pflanzen über dem Rücken der zur Gruppe gehörenden Rinder auf CMS II,3 Nr. 174 *(Abb. 1c)* und CMS IV Nr. 305 *(Abb. 1d)* sind als Variante unseres Bildthemas zu sehen, die offensichtlich keine chronologische Bedeutung hat. Auch an drei Rindern auf Siegeln der Sammlung Giamalakis *(Abb. 1g–i)* sind Spielarten des 'Leistenstils' zu sehen, die sich dadurch unterscheiden, daß die Leisten in unterschiedlicher Gewichtung jeweils an anderen Stellen aufgesetzt sind [12]. Die Abweichung des unförmig proportionierten gestreiften Rindes Giam Inv. Nr. 3219 *(Abb. 1g)* ist wohl nur durch die geringere Qualität bedingt und nicht etwa ein Kriterium, das Siegel aus der frühen Gruppe auszusondern. Auch die beiden Rinder ohne Rippen *(Abb. 1f.i)* gehören zur frühen Gruppe, da in Augen, Halsleiste, Maul und Hörnern hinreichende Merkmale vorhanden sind. Außerdem lassen die Modellierung des Körpers, der Ansatz der Vorderbeine sowie die Augen-Maul-Partie auf dieselbe Werkstatt schließen, obwohl in der Kombination mit dem peripher angeordneten kleinen Löwen *(Abb. 1i)* eine Variante des Bildthemas vorliegt [13].

Ohne chronologischen Fixpunkt ist die Gruppierung der Siegel CMS VIII Nr. 82 und Giam Inv. Nr. 3132 *(Abb. 2a.b)* [14], die das Bildthema in einer weiter schematisierten Form zeigen und möglicherweise auf ein fortgeschritteneres Stadium der Entwicklung hinweisen. Die Achse der hinteren Körperhälfte der beiden Rinder ist stärker nach oben gerichtet, so daß sich zwischen Hals und Rücken ein spitzerer Winkel ergibt als bei der Gruppe um das Lentoid der Stratigraphical Museum Extension. Durch den Verlauf des Schwanzes, den Ansatz des Vorderbeines, das zum Teil den Hals überschneidet, und durch die auf eine gerade Linie reduzierte, in einem Punkt endende Stirnpartie sind die Rinder stilistisch eng miteinander verbunden. Ein weiteres Serpentinlentoid aus der Sammlung Giamalakis Inv. Nr. 3644 (ohne Abb.) stimmt in allen Details mit CMS VIII Nr. 82 so genau überein, daß mit großer

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10 I. Pini, CMS II,4 S. XLVII (Rinder); XLIX (Ziege) hebt die Betonung der Rippen und Konturleisten als besondere Merkmale der von ihm zusammengestellten Gruppen hervor.

11 s. unten S. 163ff.

12 Sakellariou, CollGiam 38 Taf. 24 Nr. 234 (Giam Inv. Nr. 3214); 38 Taf. 24 Nr. 245 (Giam Inv. Nr. 3219); 66 Taf. 29 Nr. 393 (Giam Inv. Nr. 3124).

13 Viele Beispiele des Bildthemas sind entweder nicht gut erhalten oder von so geringer Qualität, daß sie sich jeder Einordnung entziehen.

14 Sakellariou, CollGiam 37 Taf. 24 Nr. 229 (Giam Inv. Nr. 3132); Giam Nr. 3644 (unpubliziert).

Abb. 2a–c Gelagerte bzw. laufende Rinder, SM I. a) CMS VIII Nr. 82; b) Giam Inv. Nr. 3132; c) HM Inv. Nr. 94.

Abb. 3a–c Laufende Rinder, SM III. a) CMS V,1 Nr. 279; b) CMS V,1 Nr. 252; c) CMS II,4 Nr. 225.

Wahrscheinlichkeit anzunehmen ist, daß es von der Hand desselben Siegelschneiders stammt. Wie problematisch freilich die zeitliche Trennung dieser drei Siegel von der frühen Gruppe ist, zeigt der vor dem Ende von SM IB entstandene Abdruck eines Weichsteinsiegels auf der Tonplombe HM Inv. Nr. 94 aus Kato Zakros *(Abb. 2c)*, deren Rinderdarstellung – wenn auch weniger schematisiert – ebenfalls den spitzen Winkel zwischen Hals und Rücken aufweist.

Abb. 4a–d Laufende Rinder mit zurückgewandtem Kopf, SM I. a) HM Inv. Nr. 74; b) CMS II,3 Nr. 214; c) CMS II,4 Nr. 154; d) CMS XI Nr. 118.

In einem späten Kontext ist das Bildthema nur in abgewandelter Form überliefert. Das in SM IIIB datierte Siegel CMS V,1 Nr. 279 *(Abb. 3a)* aus Grab 60 der Nekropole von Armeni, das aus einem härteren Konglomerat zum Teil von Hand geschnitten und zum Teil mit dem Rade graviert ist, zeigt, wie sich das Bildthema in SM III geändert hat [15]. Die Pose ist gegenüber den frühen Beispielen übersteigert und der Kopf so weit zurückgebogen, daß Hals und Unterseite des Kiefers nach oben zeigen. Der auf den Nacken gerichtete Pfeil liefert eine Erklärung für die geänderte Pose: das Tier ist von der Waffe getroffen und bäumt sich auf. Zugleich erhält die Darstellung eine zusätzliche Dramatik, die übertrieben und gekünstelt wirkt. Analoge Manierismen sind noch deutlicher auf dem in Hartsteintechnik ausgeführten Pendant CMS V,1 Nr. 252 aus Grab 24 von Armeni *(Abb. 3b)* zu erkennen, da hier der Pfeil fehlt, der die Pose erklärt [16]. Das in SM IIIA2–B datierte Siegel dient als Beweis, um auch CMS II,4 Nr. 225 *(Abb. 3c)* ohne Kontext spät zu datieren. Auf diesem Lentoid lassen die Haltung des weit zurückgebogenen Kopfes, das geöffnete Maul und die Position der dicht ineinander eingepaßten Beine die Umsetzung des gleichen Bildthemas wie auf CMS V Nr. 252 in weichem Stein erkennen, auch wenn das Tierkopfattribut des Hartsteinsiegels fehlt. Auffallend sind für die späte Gruppierung *(Abb. 3)* die über den Rumpf gelegten Hörner.

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15 J. Tzedakis, ADelt 27, 1972, Chron 639ff.; CMS V,1 S. 188; A. Tamvaki in: CMS Beih. 1, 209. 217f.
16 A. Tamvaki in: CMS Beih. 1, 210. 217.

Abb. 5a–d Laufende Rinder mit zurückgewandtem Kopf, SM III. a) CMS V,1 Nr. 243; b) CMS IX Nr. 168; c) Giam. Inv. Nr. 3496; d) Giam Inv. Nr. 3222.

Das Bildthema des laufenden Rindes mit zurückgewandtem Kopf ist durch den Abdruck eines Weichsteinlentoids auf der Tonplombe HM Inv. Nr. 74 aus Kato Zakros *(Abb. 4a)* noch vor dem Ende von SM I gesichert [17]. Vergleichbar sind das lebendige Laufschema und das eigenwillig gespreizte Gehörn des Rindes auf dem kissenförmigen Siegel CMS II,3 Nr. 214 *(Abb. 4b)* [18]. Obwohl der Kopf dieses Tieres mit punktförmigem Auge und Maul vom 'Leistenstil' abweicht, muß es wegen der Stilverwandtschaft zur Tonplombe ebenfalls in SM I gehören. Der Kontext von CMS II,4 Nr. 154 *(Abb. 4c)* aus Grab Γ von Episkopi, auf dem das Rind mit stärker gesenktem Kopf eine Spielart des Bildthemas zeigt, hat eine Datierungsspanne von MM III bis SM I–III [19]. Doch dürfte es in SM I zu datieren sein, da die Leisten am Hals und am Hinterteil des Tieres an den frühen 'Leistenstil' erinnern [20]. Das Rind auf CMS XI Nr. 118 *(Abb. 4d)* [21] weicht durch den starken S-Schwung des Körpers von den anderen Beispielen dieses Bildthemas ab, wenngleich der nach oben geschwungene Schwanz und die Lebendigkeit der Laufbewegung an den frühen Abdruck *(Abb. 4a)* erinnern.

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17 D. Levi, ASAtene 8/9, 1925/26, 169 Abb. 194 Taf. 16 Nr. 156 (HM Inv. Nr. 94). Zur Zerstörung von Haus A s. D.G. Hogarth, BSA 6, 1899/1900, 70ff.; S. Hood, ARepLondon 1958, 18f.

18 In CMS II,3 wird fälschlicherweise Steatit angegeben. Es handelt sich vielmehr um olivgrünen Schiefer.

19 N. Platon, Prakt 1952, 619ff.

20 Nach Kanta, LM III, 63f. gibt es in Grab Γ keine Keramik, die später als SM I zu datieren ist.

21 In CMS XI wird fälschlicherweise Steatit angegeben. Es handelt sich vielmehr um schwarzen Schiefer.

Abb. 6a–f Rinder »with striated neck« nach J.G. Younger. a) CMS XII Nr. 272; b) CMS XIII Nr. 132; c) CMS II,4 Nr. 66; d) OAM Inv. Nr. 1938.1026; e) OAM Inv. Nr. 1938.1030; f) CMS XI Nr. 185.

Im Falle von CMS V,1 Nr. 243 aus Grab 13 von Armeni *(Abb. 5a)* kann das laufende Rind mit zurückgewandtem Kopf in einem SM IIIA2-Kontext nachgewiesen werden [22]. Hier ist der Kopf so stark geneigt, daß der Unterkiefer fast den Hals berührt. Sogar zu einer Einheit verschmolzen sind Kopf und Hals des Rindes auf CMS IX Nr. 168 *(Abb. 5b)*, in dessen großen mandelförmigen Augen und den gleichlaufenden, nur wenig geschwungenen Hörnern eine Parallele zu dem Armeni-Siegel zu sehen ist. Die Achsen von Hinterteil, Rumpf und Brust sind gegeneinander versetzt. Eine vergleichbare Achsenverschiebung zwischen Rumpf und nach hinten abgeschrägtem Hinterteil hat auch das Rind auf dem Lentoid Giam Inv. Nr. 3496 *(Abb. 5c)* [23], dessen Kopf ebenfalls zwischen Hals und Rücken eingezwängt ist. Eine feine Strichelung, die schräg zur Längsachse des Halses verläuft und nur schwach im Abdruck zu erkennen ist, verbindet dieses Rind mit den Tieren auf CMS IX Nr. 168 und Giam Inv. Nr. 3222 *(Abb. 5d)* [24], deren Halsstruktur stärker ausgeprägt ist.

J.G. Younger nahm dieses von ihm »with striated necks« genannte Merkmal zum Anlaß, unter den Rindern seiner frühen 'Cretan Popular Group' eine weitere Untergruppe auszuson-

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22 CMS V,1 S. 185; A. Tamvaki in: CMS Beih. 1, 216. 218.

23 Sakellariou, CollGiam 38 Taf. 24 Nr. 235. Nach Ansicht von J.G. Younger in: CMS Beih. 1, 266 stammt das Siegel sogar von derselben Hand wie CMS V Nr. 243 und CMS IX Nr. 168.

24 Sakellariou, CollGiam 38 Taf. 24 Nr. 240.

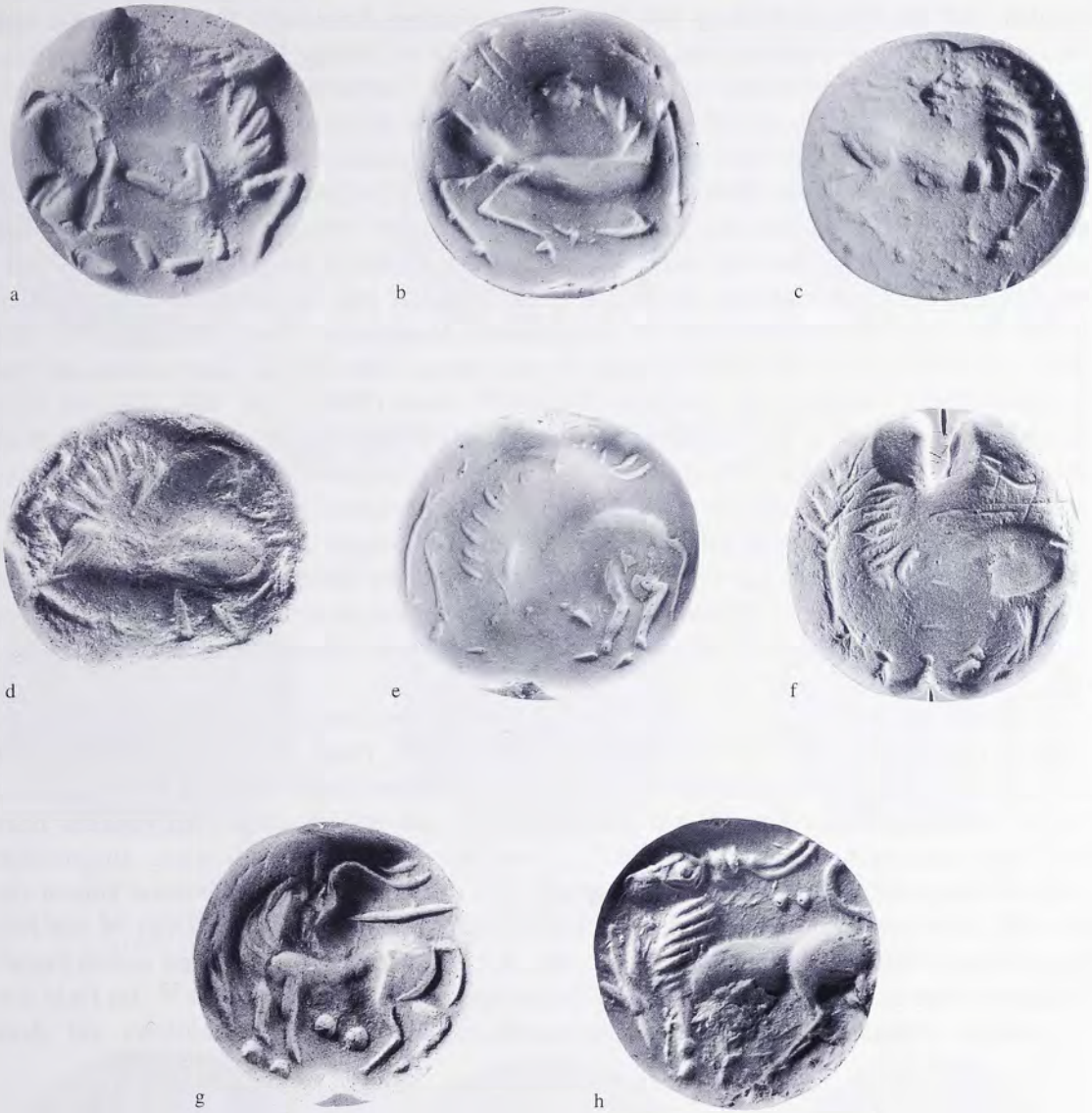

Abb. 7a–h Rinder »with striated neck« nach J.G. Younger. a) OAM Inv. Nr. 1925.50; b) CMS II,4 Nr. 87; c) CMS VIII Nr. 156; d) CMS IV Nr. 299; e) CMS IV Nr. 284.; f) CMS V,1 Nr. 282; g) CMS XIII Nr. 131; h) CMS IX Nr. 174.

dern[25]. In *Abb. 6* und *7* ist Youngers unkommentierte und nur durch einige Strichzeichnungen ergänzte Auflistung in Abdruckphotos zusammengestellt. Es soll beispielhaft gezeigt

25 Younger, Aegean Seals II, 125.

werden, daß die Gruppenbildung auf Grund eines einzigen Kriteriums für Chronologie und Werkstattfragen wenig aussagefähig ist. Wir sehen nicht nur Rinder [26] in den unterschiedlichsten Bildthemen, sondern auch mit dem Rade gravierte Hartsteindarstellungen *(Abb. 6c–e)*, die in die als Serpentinsiegel definierte Gruppe aufgenommen wurden [27]. In Bezug auf Posen und Begleitmotive bleiben viele Fragen offen, so daß ein einheitlicher chronologischer Horizont der 'First-Generation Minoan Masters' nicht nachvollziehbar ist [28]. Greift man jedoch aus Youngers Gruppierung die Beispiele der Rinder mit zurückgewandtem Kopf heraus *(Abb. 7a–g)*, so stellt man fest, daß die Streifung des Halses in der Weichsteinglyptik vorwiegend zu Bildthemen gehört, die in SM III zu datieren sind. In der Pose des stehenden Rindes mit zurückgewandtem Kopf ist die gestreifte Halsstruktur durch CMS V,1 Nr. 282 aus einem SM IIIA2-B1-Kontext aus Grab 64 von Armeni *(Abb.7f)* spät datiert, dem einzigen chronologischen Fixpunkt aus Youngers Gruppe [29]. Auch CMS IV Nr. 284 *(Abb.7e)* ohne Fundangabe kann nur in SM III entstanden sein, da außer dem lang gedehnten Hals, der auch auf CMS II,4 Nr. 87 *(Abb. 7b)* zu finden ist, noch ein Zweigmotiv vor dem Vorderteil des Rindes begegnet. Wie unten an fest datierten Siegeln nachgewiesen wird, ist dieses Pflanzenattribut, das, z.T. stärker stilisiert, auch auf anderen Siegeln *(Abb. 7c.g.h)* in Youngers Gruppe zu beobachten ist, ein wichtiges Leitkriterium für die Spätdatierung in der kretischen Weichsteinglyptik. Für den chronologischen Aussagewert des in vielen Varianten erscheinenden Begleitmotivs ist freilich allein die Position vor dem stehenden Vierfüßler entscheidend [30].

Entsprechend angeordnete Zweigmotive sind kanonischer Bestandteil der späten Darstellungen von stehenden Rindern mit zurückgewandtem Kopf. Einen chronologischen Fixpunkt für dieses Bildthema *(Abb. 8)* bildet das in SM IIIA1 datierte Serpentinlentoid CMS V Suppl. 1A Nr. 124 aus Chania-Kastelli, auf dem der Körper des Rindes ausgedünnt und der Hals sehr weit zurückgebogen ist *(Abb. 8a)* [31]. Derselben stilistischen Auffassung entsprechen auch die langgezogenen wellenförmigen Hörner. Als Bereicherung des Bildthemas kommt ein einseitig gefiederter Zweig vor dem Rind hinzu. Auf CMS II,4 Nr. 4 aus Grab 94 der Nekropole von Zapher Papoura *(Abb. 8b)*, dessen Kontext von SM II-IIIB einen weiten Datierungsspielraum zuläßt, ist das Zweigmotiv in eine gepunktete Reihe aufgelöst [32]. Im Falle des in wenigen Schnitten vereinfacht wiedergegebenen, ausgedünnten Vierfüßlers auf dem

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26 CMS II,4 Nr. 66 *(Abb. 6c)* zeigt keine Rinder, sondern zwei Löwen im Wirbel mit gestreiften Mähnen.

27 Younger, Aegean Seals II, 123: »Group of serpentine seals«. OAM Inv. Nr. 1938.1026 (Kenna, CS Nr. 300) ist aus Jaspis, OAM Nr. 1938.1030 (Kenna, CS Nr. 312) und CMS XI Nr. 185 sind aus Hämatit.

28 Younger Aegean Seals II, 109ff. Im Falle von CMS V Nr. 282 wird ebenda 125 der SM IIIA2-Kontext – wohl als Ausnahme – erwähnt.

29 CMS V,1 S. 188; A. Tamvaki in: CMS Beih. 1, 210. 217f.

30 Die Gültigkeit dieses Kriteriums ist vielfach durch Funde der in SM IIIA-B zu datierenden Nekropole von Armeni (s. unten Anm. 49) nachgewiesen. Vgl. die unten angeführten Beispiele für Pflanzenmotive in Verbindung mit Ziegen.

31 CMS V Suppl. 1A S. 106. 126.

32 Auf Grund des Eintrags in das Inventarbuch des Museums von Iraklion zugewiesen. A. Evans, The Prehistoric Tombs of Knossos (1906), erwähnt das Siegel nicht.

Abb. 8a–c Stehende Rinder mit zurückgewandtem Kopf, SM III. a) CMS V Suppl. 1A Nr. 124; b) CMS II,4 Nr. 4; c) CMS V Suppl. 1B Nr. 278.

Abb. 9a–c Stehende Rinder mit vorwärts gerichtetem Kopf, SM III. a) CMS V,1 Nr. 254; b) Giam Inv. Nr. 3520; c) CMS V,2 Nr. 751.

Abb. 10a–c Stehende Rinder mit emporgehobenem Kopf, SM III. a) CMS IX Nr. 147; b) CMS V Suppl. 1B Nr. 232; c) CMS I Nr. 495.

Steatitlentoid CMS V Suppl. 1B Nr. 278 aus Armeni *(Abb. 8c)* ist in der Kombination mit dem zahnartig gestalteten Zweig die Verbindung zum Festland evident [33]. Steatit stellt in der späten Bronzezeit auf Kreta eine Ausnahme dar und ist im Falle dieses Siegels ein wichtiges Argument für die Annahme eines festländischen Imports [34].

Am Bildthema des stehenden Rindes mit nach vorne gerichtetem Kopf *(Abb. 9)* kann der chronologische Aussagewert des Zweigattributs bestätigt werden. Wir sehen in dem Zahnzweig *(Abb. 9a)*, dem einseitig gefiederten *(Abb. 9b)* und dem zweiseitig gefiederten Zweig *(Abb. 9c)* drei Versionen des für die Spätdatierung relevanten Motivs. Eine weitere Spielart ist in den gestielten Zweigen *(Abb. 10a–c)* zu sehen, deren unteres Ende mit einem kurzen Querstrich versehen ist, der bisweilen auch punktförmige Gestalt annehmen kann *(Abb. 9c)*. Das Rind auf CMS V,1 Nr. 254 aus Grab 27 von Armeni *(Abb. 9a)*, für das eine Datierung in SM III A1-2 angegeben wird [35], wirkt mit seinem langgezogenen, geradachsigen Körper besonders steif. Durch zwei beulenförmige Ausbuchtungen im Nacken und an der Brust erhält das Vorderteil des Tieres eine Gestalt, die dem S-förmigen Schwung der beiden anderen Rinder entspricht [36]. In den extrem in die Länge gezogenen wellenförmigen Hörnern begegnet eine ähnliche Tendenz zu manierierter Darstellung wie bei den Rindern *(Abb. 3a.b)*. Als weiteres Kombinationselement des Bildthemas begegnet über dem Rücken ein Motiv, das wohl als ein auf zwei Kreise reduzierter Achtförmiger Schild zu verstehen ist [37]. Das gleiche Bildthema wird auf dem Schieferlentoid CMS V,2 Nr. 751 aus der Pefkakia-Magoula bei Volos *(Abb. 9c)* wiederholt, das mangels festländischer Parallelen wohl als ein kretisches Importstück anzusehen ist [38]. Der Achtförmige Schild ist in weichem Stein nur in SM III bekannt und könnte, mit aller gebotenen Vorsicht, in der Weichsteinglyptik ebenso ein datierendes Kriterium sein wie der Zweig vor dem Tier [39].

Drei Variationen eines anderen Bildthemas, bei dem der Kopf des Rindes emporgehoben und die Spitze des geöffneten Mauls nach oben gerichtet bzw. weit zurückgebogen ist *(Abb. 10)*, sind gleichfalls durch das Zweigmotiv vor dem Tier in SM III zu datieren. Das wohl in Hartsteintechnik ausgeführte Serpentinlentoid CMS IX Nr. 147 *(Abb. 10a)* aus dem Cabinet des Médailles ist zusätzlich mit dem Achtförmigen Schild kombiniert. Durch CMS V Suppl. 1B Nr. 232 aus Grab 104 von Armeni *(Abb. 10b)* ist dieses Bildthema, wenn auch in extremer Übersteigerung der Pose, in einem SM III-Kontext gesichert [40].

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33 Weitere Beispiele: I. Pini, CMS V Suppl. 1B S. XXIX. XXXI Anm. 42.

34 Bei den Materialangaben 'Steatit' in den Bänden CMS II,3 und II,4 handelt es sich nach neueren Untersuchungen des CMS fast ausschließlich um Serpentin oder Schiefer. In der einen Querschnitt aller auf Kreta vorkommenden Siegelmaterialien repräsentierenden Sammlung Giamalakis, deren Steine der Verf. bei der Neuaufnahme für CMS III in den Jahren 1991-1993 untersuchen konnte, ist unter den 198 Lentoiden nur in 4 Fällen mit Sicherheit Steatit nachzuweisen. s. oben Anm. 3.

35 J. Tzedakis, ADelt 27, 1972, Chron 639ff.; CMS V,1 S. 186; A. Tamvaki in: CMS Beih. 1, 216f.

36 Gleiches Phänomen bei Löwen s. unten S. 203.

37 Zum Symbolcharakter des Motivs s. N. Marinatos, Minoan Sacrificial Ritual (1986) 64ff.

38 Hierfür spricht auch der auf Kreta übliche grau- bis olivgrüne Schiefer. vgl. oben Anm. 34.

39 In Hartstein ist die Kombination von Achtförmigem Schild und Zweig z.B. durch das Karneollentoid CMS II,3 Nr. 111 aus der Kalyvia-Nekropole in SM IIIA belegt.

40 J. Tzedakis, ADelt 33, 1978, Chron 378ff.; CMS V Suppl. 1B S. 208.

ZIEGE

Das in der Weichsteinglyptik geläufige Schema der laufenden bzw. gelagerten Ziege mit typischer Winkelstellung der Vorderbeine ist durch die sogenannte Cut Style-Ziege in hartem Stein vielfach belegt [41]. Die Pose des nach vorne gerichteten, leicht gesenkten Kopfes ist bis auf wenige Ausnahmen bei laufenden Rindern nicht üblich und somit ein wichtiges ikonographisches Kriterium, Rind und Ziege auseinanderzuhalten [42]. Auch das handgravierte Punktkreisauge der Rinder ist bei den Ziegen nicht zu beobachten. Das Serpentinlentoid HM Inv. Nr. 2307 *(Abb. 11a)* aus der in MM IIIB–SM I datierten Maison de la façade à redans in Mallia bildet den einzigen frühen chronologischen Fixpunkt für das Bildthema der laufenden Ziege in der kretischen Weichsteinglyptik [43]. Die relativ grob mit dem Stichel gravierten Leisten, mit denen in derber Linienführung das Motiv wiedergegeben wurde, haben ihre Entsprechungen unter den laufenden Rindern um das Lentoid der Stratigraphical Museum Extension (Abb. 1) [44], auch wenn auf dem malliotischen Siegel die Rippen auf dem Rumpf nicht eigens abgesetzt sind. Der in Leistenmanier über das Hinterteil gelegte Oberschenkel ist bei den Ziegen noch stärker ausgeprägt als bei den Rindern [45]. Die kurzen parallelen Verdickungen am Ansatz des Gehörns können nur als Eigenarten des 'Leistenstils' verstanden werden. Um das malliotische Siegel lassen sich weitere Ziegenbeispiele gruppieren, deren Kontur bzw. Binnenzeichnung mit ähnlich groben Leisten wiedergegeben ist. Die Querrippung des Halses der korpulenten Ziege auf CMS II,4 Nr. 224 *(Abb. 11b)* entspricht in vergleichbar derber Linienführung dem 'Leistenstil', und auf CMS XI Nr. 247 *(Abb. 11c)* begegnen die über den Brustkorb gelegten Rippen der Rinder von SM I [46]. Die Ziegen eines von Punkten gesäumten Hörnertyps auf CMS XII Nr. 274 und 275 *(Abb. 11d.f)* sind auf Grund ihres leiterförmig strukturierten Brustkorbes und der Rippung des Halses wohl derselben Werkstatt zuzuweisen [47]. Ein anderer kurzbogiger Hörnertyp, der aus aneinandergereihten kleinen Knoten besteht, verbindet auch die Tiere auf CMS II,3 Nr. 166 und 200 *(Abb. 11e.g)* miteinander, die aus einer Werkstatt stammen dürften.

Weichstein-Bildthemen mit der stehenden Ziege sind in frühen Kontexten nicht gesichert. Dies verwundert, da in der Hartsteinglyptik vor allem die 'talismanische' Ziege in dieser Pose häufig dargestellt wurde [48]. Durch insgesamt acht Beispiele aus der Nekropole von

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41 Begriff: Boardman, GGFR 48. 392ff. 'Cut Style'-Ziegen: E. Thomas in: CMS Beih. 1, 226ff. Abb. 3-13.

42 In dieser Pose ist die Nähe des Schemas der 'Cut Style'-Ziege evident. Dies bestätigt auch die punktförmige Maulspitze.

43 H. u. M. van Effenterre, EtCrét XVII 102 Taf. 74,4; W.-D. Niemeier in: CMS Beih. 1, 92.

44 I. Pini, CMS II,4 S. XLIX

45 Im Zusammenhang mit Rindern erwähnt von Pini a.O. (Anm. 44) S. XLVII. Stark geschwungen bei den Ziegen CMS V Suppl. 1A Nr. 83 und CMS II,4 Nr. 106.

46 Weitere Beispiele: CMS IV Nr. 292 mit leistenförmigen Rippen und Giam Inv. Nr. 3450 mit quergeripptem Hals.

47 Derselben Werkstatt muß mit großer Wahrscheinlichkeit auch das Rind auf CMS XII Nr. 130 zugewiesen werden.

48 Vgl. Onassoglou, DtS Taf. 47. 48; E. Thomas in: CMS Beih. 1, 226f. Abb. 1. 2.

Abb. 11a–g Gelagerte oder laufende Ziegen, SM I. a) HM Inv. Nr. 2307; b) CMS II,4 Nr. 224; c) CMS XI Nr. 247; d) CMS XII Nr. 274; e) CMS II,3 Nr. 166; f) CMS XII Nr. 275; g) CMS II,3 Nr. 200.

Armeni ist die Spätdatierung des Bildthemas der stehenen Ziege mit Zweigattribut in der kretischen Weichsteinglyptik für die Zeitspanne von SM IIIA–B hinreichend gesichert [49].

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[49] CMS V,1 Nr. 248. 250. 272; CMS V Suppl. 1B Nr. 207. 231. 238. 245. 286. Zur Datierung der Nekropole von Armeni s. I. Pini, CMS V Suppl. 1B S. XXIVf. XXX; 205ff.

Abb. 12a–d Stehende Ziegen mit Pflanze, SM III. a) CMS V,1 Nr. 250; b) CMS V,1 Nr. 272; c) CMS V,1 Nr. 248; d) CMS X Nr. 165.

Trotz individueller Unterschiede der zum Teil in mäßiger Qualität gravierten Siegel lassen sich einige Charakteristika festhalten, die für SM III typisch sind und bei den laufenden Ziegen nicht vorkommen. Ein sehr markantes Merkmal ist das weit geöffnete Maul der späten Ziegen. Die in SM III datierten Siegel CMS V,1 Nr. 250 und 272 *(Abb. 12a.b)* sowie CMS X Nr. 165 ohne Fundangabe *(Abb. 12d)* zeigen in flüchtiger Schnittechnik Ziegen mit Mäulern, zwischen deren fast parallel geführten Ober- und Unterkiefern ein breiter Spalt klafft [50]. CMS V,1 Nr. 248 *(Abb. 12c)* repräsentiert einen Maultypus, dessen Ansatzstelle am Kopf U-förmig gerundet ist [51]. Die Körper dieser späten Ziegen sind sehr unterschiedlich proportioniert und in der minderwertigen Qualität nicht aussagefähig. Allenfalls ist noch eine stärker angeschwollene Brust zu beobachten und andeutungsweise der S-förmige Schwung des Vorderteils, der oben als spätes Merkmal der stehenden Rinder erkannt werden konnte [52]. Von den Ziegen mit detaillierter, zweisträngiger Wiedergabe der Beine *(Abb. 13)*, deren isoliert angesetztes linkes Hinterbein auffällt, ist nur das Beispiel CMS V Suppl. 1B Nr. 245

50 Einem anderen Typus mit weit auseinanderklaffendem, schnabelartigem Maul, das an einen aus zwei Punkten bestehenden Kopf angesetzt ist, gehören die Ziegen der Siegel CMS V Suppl. 1B Nr. 238 und CMS II,4 Nr. 85 an.

51 Ähnliche Mäuler: CMS V Suppl. 1B Nr. 229. 245.

52 s. oben Anm. 36.

Abb. 13a–d Stehende Ziegen mit Pflanze, SM III. a) CMS V Suppl. 1B Nr. 245; b) OAM Inv. Nr. 1938.1096; c) CMS XI Nr. 349; d) OAM Inv. Nr. 1941.134.

Abb. 14 CMS I Suppl. Nr. 144.

aus Grab 111 von Armeni *(Abb. 13a)* in SM III datiert. Die Tiere *(Abb. 13a.b.d)* verbindet eine vergleichsweise graphische Darstellungsweise, in der Teile des Körpers wie auch die zweisträngigen Beine durch feine Linien wiedergegeben werden, die nicht mit den Rippen des frühen 'Leistenstils' verwechselt werden dürfen.

Am Beispiel von CMS I Suppl. Nr. 144 *(Abb. 14)* können – obwohl ohne Fundangabe – die wichtigsten stilistischen Anhaltspunkte für die Spätdatierung innerhalb der Weichsteinglyptik noch einmal zusammengefaßt werden: die stehende Pose im Gegensatz zum Laufschema der frühen Ziegen, der in verschiedenen Achsen ausgerichtete dreiteilige Körper, der von der Brust bis zum Nacken reichende S-Schwung des Vorderteils, das geöffnete Maul und – als wichtiges Leitkriterium – die vor dem Tier aufragende Pflanze, hier mit Stiel und verdicktem Ende. Nicht zuletzt kommt in der guten, wenn auch provinziellen Qualität dieses Siegels die im Vergleich zu den Meisterwerken in hartem Stein bescheidene kretische Weichsteinglyptik zu gebührender Ehre.

LES SCEAUX AVEC DES SIGNES HIEROGLYPHIQUES. QUE LIRE? UNE QUESTION DE BON SENS

JEAN-PIERRE OLIVIER

A Marburg, en 1978, me plaçant alors dans l'optique d'un *utilisateur minoen*, j'avais exposé pourquoi je pensais que l'écriture sur les sceaux était avant tout *décorative* et je concluais mon intervention [1] par cette phrase "Ces «inscriptions», je pense que nous devons les qualifier «d'ornementales»... Parler «d'inscriptions» *lisibles* (c'est-à-dire destinées à être lues), au sens strict du terme, non". Et je maintiens ce point de vue, même s'il peut paraître quelque peu en contradiction avec le suivant.

A Austin, en 1989, me plaçant cette fois dans l'optique d'un *éditeur du* CHIC, j'avais montré comment certains groupes de signes — même s'ils n'étaient pas nécessairement *destinés* à être lus — étaient néanmoins «lisibles» pour nous (c'est-à-dire identifiables en tant que groupes de signes formant des «mots»); et quand ils ne l'étaient pas, quels procédés pouvaient être mis en oeuvre pour les éditer [2].

A Clermont, en 1992, maintenant que le CHIC est pratiquement terminé, je tiens surtout à déclarer pourquoi j'estime, malgré l'opposition que cela risque de soulever, que la «lecture *stricto sensu*» des sceaux avec des signes hiéroglyphiques est, *théoriquement* (du moins en ce qui *nous* concerne), une chose relativement simple, gouvernée par le *bon sens*.

En français, «le groupe de signes» 'bon sens' peut s'entendre — dans le cas qui nous occupe — de trois façons distinctes mais liées entre elles:

1) 'Bon sens' = *«acception correcte»*: tant de ce qu'on appelle «signe hiéroglyphique» que de ce qu'on met dans le terme «lire».

Pour les *signes* hiéroglyphiques, plus on les étudie, moins il y en subsiste: en ce qui concerne les «syllabogrammes», le CHIC en répertoire 96 différents (dont 4 sont attestés sur

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* Abréviations bibliographiques:

MU I J.-Cl. Poursat – L. Godart – J.-P. Olivier, Fouilles exécutées à Mallia. Le Quartier Mu I, EtCrét 23 (1978).

MU II B. Detournay – J.-Cl. Poursat – Fr. Vandenabeele, Fouilles exécutées à Mallia. Le Quartier Mu II, EtCrét 26 (1980).

Origine des illustrations: *Fig. 1* : SM I; *Fig. 2-8* : CHIC.

1 J.-P. Olivier in: CMS Beih. 1, 115.

2 Id. in: ASSA 11sq.

les sceaux uniquement et 37 dans les «autres documents» [3] seulement, ce qui donne 55 signes communs aux deux sortes de support, chiffre qui doit être considéré, pour le moment, comme celui du syllabaire «de base»).

Pour la *lecture*, il s'agit toujours d'une question de définition: se lit ce qui se prononce, ou ce qui influe sur «l'orientation» à donner à une lecture [4]; quant à ce qui modifie *éventuellement*, ou plus exactement précise *peut-être* la signification ou le «champ d'application» de certains groupe de signes, ce serait, très approximativement, ce qu'Evans a appelé «badge» [5] (terme qui me convient, car il présente l'avantage de ne pas être utilisé en linguistique).

Cela — un «badge» — existe peut-être sur les sceaux, mais certainement pas dans les documents d'archives: on pourra se demander 'pourquoi'? Je traiterai de la question en un autre endroit, me contentant d'effleurer ici la question du «badge acronymique».

2) 'Bon sens' = *«bonne direction»* (pour autant que la valeur de «signe» et de «lire» ait été exactement établie, bien entendu).

Sur les ± 150 groupes de signes différents qui figurent sur les scellés et les sceaux, un peu plus de 100 n'ont pas de sens de lecture assuré (et pour certains d'entre eux, on ne connaît même pas l'ordre dans lequel il convient de faire se succéder les signes).

Pour cette centaine de groupes, plusieurs artifices de présentation permettront, dans les Index du CHIC, de disposer de toutes les formes possibles (dont une seule — mais nous ne saurons pas laquelle — sera la bonne).

Il s'agit là d'un problème que tout éditeur d'abord, tout exégète ensuite, devra affronter et que personne ne résoudra tant qu'un groupe de signes de direction de lecture incertaine n'aura pas été retrouvé dans des documents «linéaires», c'est-à-dire ayant un début et une fin clairement indiqués: c'est souvent — mais pas toujours — le cas dans les documents d'archives et les «autres documents» [6].

3) 'Bon sens' = *«raison»* (chose qui est, dans cette signification, comme chacun sait, la chose du monde la mieux partagée): on ne l'appliquera qu'à la cinquantaine de groupes de signes dont la direction est assurée, en se fondant sur les définitions acceptées au premier point ci-dessus.

Les résultats de cette triple mise en oeuvre du «bon sens» aboutiront à un état de choses assez simple où les amateurs de complication [7] ne trouveront certainement pas leur compte:

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[3] Les «logogrammes» et les «fractions» ne concernent les sceaux qu'à titre de «curiosités», très limitées quantitativement (à supposer que leur «existence» [c'est-à-dire la réalité de leur «lecture»] ne soit pas qu'un mirage).

[4] Ainsi des «déterminatifs» devant les noms de pays, les noms de divinités, etc.: je suis toutefois persuadé que ce genre de signes n'existe pas dans les écritures crétoises.

[5] Evans, SM I 263sq. (en fait les «badges» sont, pour Evans, des représentations animales [lion, chat, chien, loup, âne, chouette, colombe, poisson, araignée] renvoyant au nom propre d'un personnage; le CHIC ne tient tout simplement pas compte de la plupart de ces représentations: on les repérera aisément sur le dessin et/ou la photo de la face qui la porte éventuellement)

[6] Les progrès ne pourront venir que de nouveaux textes ou de la meilleure lecture de textes déjà connus (cf. les deux nouveaux cas donnés à la note 39 ci-dessous).

[7] Synonymes: «dédale», «labyrinthe».

ils se consoleront en exerçant leur bon sens (dans le bon sens: c'est-à-dire cartésien) à l'établissement du bon sens («directionnel») des quelque cent groupes de signes qui n'en possèdent pas encore.

A ces trois définitions du «bon sens» qui s'appliquent à la «lecture *stricto sensu*», il faut en ajouter une quatrième qui concerne un aspect plus technique du traitement des sceaux, leur manipulation.

C'est cet aspect que je développerai ici, non pas parce qu'il est plus intéressant, épistémologiquement parlant (c'est le premier des «bons sens» qui rempli, selon moi, cette clause — et il s'agit, bien entendu du plus difficile), mais parce qu'il est le plus nouveau.

Cette quatrième définition du «bon sens» est la suivante:

«bon sens du développement du sceau pour obtenir l'empreinte», c'est-à-dire «bonne direction du déroulement des faces du sceau pour obtenir la succession des empreintes des différentes faces».

Et dans ce cas «bon» ne veut dire ni «correct», ni «exact», ni «raisonné», il signifie simplement: «accompli selon la bonne méthode», c'est-à-dire en fait *toujours la même*, une fois qu'une définition en a été donnée.

L'indication du sens de déroulement des faces d'un sceau a été introduite pour la première fois, si je ne me trompe, par Jean-Claude Poursat en 1980 [8].

On a discuté du problème, si je me souviens bien, dans les coulisses du colloque d'Austin, en 1989, et John Younger a été le premier à faire tourner «systématiquement» les sceaux d'une collection déjà éditée [9], celle du Metropolitan Museum of Art de New York [10].

Je ne suis pas entièrement d'accord avec les conclusions qu'il a tirées de son travail, mais l'important est qu'il m'ait convaincu qu'il était, méthodologiquement parlant, indispensable de «faire tourner les sceaux» (qu'ils soient à 2, 3, 4 ou 8 faces) d'une façon *standard*.

Exactement comme dans les états préparatoires du CHIC, je faisais tourner les barres en argile à 4 faces d'une façon standard: il n'y avait pas de raison d'accorder à ces dernières ce qu'on aurait refusé aux premiers.

Je me suis donc résolu, à un an de la remise du manuscrit du CHIC, de «faire tourner les sceaux» à plus d'une face [11] portant des groupes de signes en écriture hiéroglyphique crétoise.

J'ai commencé par ceux du Musée archéologique d'Iraklio et j'ai continué par ceux d'Athènes, de Cambridge, de Londres, d'Oxford et de Paris. Pour ceux de la collection

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8 MU II 159 n. 1.

9 En dernier lieu dans le CMS XII où, bien entendu, le fait que l'objet en soi (la pierre) puisse avoir un «haut» et un «bas», tourner vers la gauche ou vers la droite était complètement passé sous silence.

10 Il a publié certains des résultats (ceux qui concernent les sceaux avec des inscriptions hiéroglyphiques justement) dans SMEA 28, 1990, 85sq. et je tiens à le remercier de m'avoir communiqué les fruits de son étude bien avant la parution de ses «New Observations on Hieroglyphic Seals».

11 En fait, je pense à présent qu'il n'est pas sans intérêt que pour un sceau «à une face» (cachet à tige par exemple) la représentation soit orientée par rapport à la prise et au trou de suspension: je regrette que cette idée me soit venue trop tard pour en faire bénéficier le CHIC.

Métaxas, pour le sceau de Bonn, pour ceux de Berlin, pour celui de Vienne et celui de Zurich j'ai sollicité le concours de diverses personnes qui sont dûment remerciées dans le CHIC. Heureusement, John Younger s'était déjà occupé de ceux de New York.

A l'heure actuelle, il n'y a que l'ancien sceau de la collection Erlenmeyer [12] qui n'ait pas été manipulé, vu que je ne l'ai pas encore situé sur la carte du monde.

Bien entendu, les sceaux «égarés» dans d'inaccessibles collections privées ou vraiment perdus ne sont pas prêts de nous livrer la succession de leurs faces. Ils seront, dans le CHIC, présentés *horizontalement*, et leurs faces appelées *a*, *b*, *c* et *d*.

Les sceaux qui auront tourné, les sceaux «new look», seront présentés *verticalement*, et leurs faces appelées α, β, γ et δ: ainsi il n'y aura aucune confusion possible.

La face α, le plus généralement (en tout cas quand le CMS existe), est l'ancienne face *a*; elle se présente donc verticalement, c'est-à-dire avec l'axe du trou de suspension vertical; le haut (et donc le bas!) a été choisi arbitrairement, mais la définition de ce qui est le haut, bien qu'arbitraire, est essentielle: au haut de la face α correspond obligatoirement le haut des autres faces: il n'est pas question de faire passer le haut en bas avant d'imprimer la seconde face, puis de changer encore une fois!

Pas plus qu'il n'est question de tourner dans n'importe quel sens: arbitrairement, toujours, John Younger a décidé que ce serait de la gauche vers la droite, c'est-à-dire dans le sens des aiguilles d'une montre, quand on regarde la face inférieure du sceau, comme pour voir à travers le trou de suspension.

Ainsi on obtient un développement standard, qui peut être appliqué à n'importe quel sceau, n'importe où dans le monde.

Le «désavantage» de cette façon de procéder est que l'esthétique n'y gagne pas et que des représentations familières nous semblent bizarrement orientées, voire complètement renversées [13].

Comme je ne fais tourner les sceaux que depuis le mois de mai 1992, je n'ai pas encore eu le temps d'étudier vraiment les successions des «groupes de signes» les plus fréquents [14], chose qu'il était absolument impossible de faire jusqu'à présent, puisque l'ordre de succession des faces dans toutes les éditions n'était absolument pas méthodique.

Evans avait donné le (mauvais) exemple et tout le monde l'avait suivi; d'ailleurs, pourquoi aller représenter un sanglier dressé sur sa queue, une fleur avec la corolle en bas, ou un bonhomme sur la tête? Cela n'aurait évidemment eu ni queue ni tête!

Eh bien non! Cela a une réelle importance si l'on veut avoir une représentation exacte du rapport des faces entre elles, si l'on désire savoir comment le graveur a (peut-être...) voulu que les faces se succèdent, et dans quelle position relative les différentes représentations apparaissent sur les différentes faces d'un même sceau.

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12 CHIC nº 300 (CMS X nº 52).

13 C'est pour cela que J.-Cl. Poursat (cf. ci-dessus n. 8) avait résolu le problème au moyen de flèches (dans le catalogue) indiquant «pour les faces destinées à être vues verticalement, l'orientation du sujet par rapport à l'axe de rotation du prisme» (heureusement, il n'avait pas trouvé de prismes à quatre faces dans le Quartier Mu!).

14 Et encore moins les «oppositions» au sein de ces successions: les utilisateurs du CHIC auront donc encore du travail devant eux.

Pour qui étudie l'intensité du regard et la courbure des cils de l'hippopotame femelle dans la glyptique minoenne, cela ne présente évidemment que peu d'intérêt.

Mais cela n'est nullement négligeable pour qui, comme jadis Henri et Micheline van Effenterre [15], souhaite jeter les bases d'une «grammaire de la glyptique minoenne», car cela représente, *mutatis mutandis*, une étude de la «syntaxe» [16].

Et pour qui, comme moi, essaie de savoir ce qui peut être lu et comment ce «possible à lire» peut éventuellement s'organiser, cela s'est révélé une clé assez exceptionnelle.

Et pour tous ceux qui s'intéressent aux sceaux minoens, à quel titre que ce soit (et peut-être même en tant qu'hippotamophtalmologues), je crois que cette approche peut constituer le point de départ de réflexions fructueuses.

Je ne donnerai ici que deux exemples, mais il en existe évidemment bien d'autres [17].

Premier exemple:

Le prisme à trois faces en cornaline blanche de l'Ashmolean CHIC n° 256 [18] dont je prétendais à Marburg, en 1978, qu'il était illisible pour un Minoen très moyen [19] (et c'est toujours mon opinion!), se présente de la façon suivante dans SM I *(Fig. 1)*:

Fig. 1 SM I P. 22.

15 H. et M. van Effenterre in: CMS Beih. 0, 22sq.

16 «Syntaxe» à laquelle ces deux pionniers n'ont d'ailleurs jamais touché, puisque les trois sceaux du Cabinet des Médailles que j'ai fait tourner étaient parmi les plus maltraités ...: mais ils avouaient eux-mêmes (p. 27) qu'ils avaient dû négliger et l'ordre de lecture des faces et le sens de lecture par rapport à l'axe du prisme selon les faces (autant dire qu'ils ont été contraints de se limiter, tout au plus, à faire de la «lexicographie»).

17 D'ailleurs, ainsi que je l'ai déjà signalé, je n'ai pas encore eu tellement l'occasion de chercher ... donc de trouver.

18 AM 1910.235 (P. 22 de SM I).

19 J.-P. Olivier in: CMS Beih. 1, 113.

la face *a* est horizontale pour que le sanglier repose sur ses quatre pattes;

la face *b* est verticale pour que le bouquetin ait la tête en haut;

la face *c* est disposée ainsi je ne sais trop pourquoi, sans doute pour que la flèche ait la pointe en haut.

Très joli, mais hautement suspect de ne pas porter une inscription destinée à être lue (ou, plus exactement, à être imprimée avant que d'être lue, car sur la pierre elle-même, presque translucide, il n'y a pas grand-chose, sinon rien à voir).

En effet, sur chaque face on trouve à la fois un signe du syllabaire *et* une représentation qui n'a rigoureusement rien à voir avec le syllabaire tel qu'on peut le définir à partir des documents d'archives (deux animaux complets [20] représentés de façon assez réaliste et un motif décoratif en forme de «croix tournoyante» ou quelque chose d'approchant).

J'avais reparlé de ce prisme à Austin, en 1989, en expliquant qu'il fallait, si on voulait vraiment éditer les trois signes hiéroglyphiques qu'il nous offre comme un groupe de signes unique, en donner *six* transcriptions (c'est-à-dire la factorielle de 3), dont une seule était peut-être la bonne et cinq certainement fausses [21].

Cet «effort éditorial» que j'avais accompli il y a trois ans est maintenant récompensé.

En effet, si l'on fait tourner CHIC n° 256 de la façon standard décrite ci-dessus (avec le signe hiéroglyphique de la «porte» de la face *a* en haut), on obtient le résultat suivant *(Fig. 2)*:

Fig. 2 CHIC n° 256.

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20 La «tête de sanglier» [le n° 70 de SM I: «the fore-part» of a «galloping board» est le «loup tirant la langue» = CHIC n° 018 ≈ SM I n° 73!] et la «tête de bouquetin» (sans le reste du corps) ne se rencontrent d'ailleurs pas dans le syllabaire hiéroglyphique: un argument de plus à verser au dossier de l'inexistence de la pratique de la *pars pro toto* en hiéroglyphique crétois.

21 J.-P. Olivier in: ASSA 13.

et on s'aperçoit que les deux autres signes hiéroglyphiques se retrouvent *également* en haut [22]!

Il n'y a qu'une chance sur quatre [23] pour que cela soit un produit du hasard (je n'exclurais donc pas absolument ce dernier si d'autres exemples du même genre — dont nous allons voir certains par la suite — ne me faisaient penser qu'il faut l'écarter).

C'est donc intentionnellement que le graveur a mis les trois signes *«lisibles»* (les trois signes du syllabaire), à une même extrémité du prisme, à proximité immédiate les uns des autres.

Ainsi, en faisant tourner le sceau entre les doigts, avec un signe hiéroglyphique «visible» [24], ce sont les trois signes (et eux seuls) qui défilent devant les yeux, puisque les doigts cachent l'autre moitié de l'objet.

Et, à la limite, on peut imprimer le «mot à lire» en trois fois (en n'appuyant dans l'argile ou la cire que la moitié du prisme dépassant d'entre les doigts), si l'on fait se suivre les faces dans le bon sens [25]: l'utilisateur devait donc savoir quelle était la *première*, puis la *deuxième* face (la *troisième* venait évidemment toute seule) [26].

Il ne s'agit certainement pas d'un procédé très pratique pour inscrire son nom ou son titre (ou tout ce que vous voulez) sur un morceau d'argile ou de cire [27], mais ce n'est ni absolument impensable, ni absolument impossible.

Accessoirement, la valeur «symbolique» [28] du pauvre sanglier avec la tête en haut et du malheureux bouquetin avec la tête en bas ne me semble pas s'imposer de façon très péremptoire dans une utilisation de ce genre... mais c'est une question d'opinion.

Ce «tournage» mécanique est donc assez satisfaisant pour l'esprit: je rappellerai cependant qu'il ne peut s'agir que d'une prouesse, voire d'un jeu, et ce pour plusieurs raisons:

— la pierre, translucide, est assez difficilement «lisible» au premier coup d'oeil (et même au second, quand les conditions d'éclairage ne sont pas bonnes);

— le maniement d'un objet de 16 mm de haut sur 10 mm de large, tenu entre les premiers doigts de la main n'est pas une chose facile (même avec un trombone déplié passé dans le trou de suspension, l'objet se révèle assez délicat à manipuler).

Mais je veux bien admettre qu'il s'agit d'un «fait culturel» qui m'est assez étranger et qu'un Minoen devait pouvoir faire cela beaucoup mieux que moi.

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22 Accessoirement, l'ordre de succession des faces n'a pas changé, mais il n'existait qu'une chance sur deux pour que ce soit le cas.

23 Et non sur six, puisque la première face est déterminée et orientée.

24 En fait très peu, dans le cas présent (cf. ci-dessus).

25 Notre «bon sens» nº 2.

26 Pour le Minoen il n'y avait que trois possibilités d'impression et deux possibilités de lecture (dextroverse ou sinistroverse): mais il connaissait le «mot» (pour autant qu'il y en ait existé un, bien entendu); pour nous, cela fait toujours six solutions (la seule différence avec «le stade Austin» c'est que le haut et le bas de chacun des signes est en relation avec le haut et le bas de chacun des autres: ce qui n'a rigoureusement aucun intérêt puisque l'on peut facilement montrer, d'après le témoignage des documents d'archives, qu'un syllabogramme hiéroglyphique crétois n'a ni «haut» ni «bas», ni «gauche» ni «droite»...).

27 Qui lui non plus n'avait pas nécessairement un «haut» ou un «bas», une «gauche» ou une «droite» (sauf, peut-être, dans quelques cas comme celui des «nodules» [catégorie Ha du CHIC, «Clay sealings» d'Evans]).

28 Ou la valeur de «badge», ou ce que l'on voudra.

Excursus. A ce stade-ci de l'exposé, il est encourageant de se rappeler que nous avons d'autres indices de *l'utilisation possible de la moitié d'un sceau seulement*:

a) il s'agit d'abord, des deux prismes à 4 faces de l'Ashmolean [29] où sur la *même* face on trouve à la fois 𓅓𓇋 et 𓅓𓋴, séparés par une ligne double de division que l'on pouvait donc (ou que l'on devait donc?) imprimer séparément [30] *(Fig. 3)*;

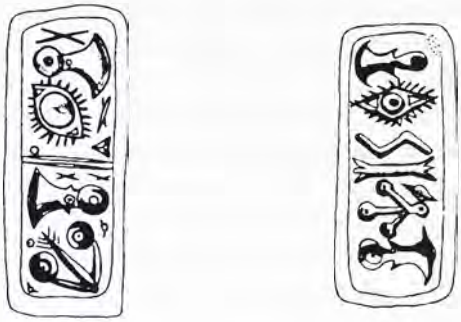

Fig. 3 CHIC nº 283α et nº 297δ.

b) il s'agit ensuite d'un autre cas de ce type, mais plus compliqué, un prisme à 4 faces de Berlin [31] *(Fig. 4)* où, en partant du signe central «mis en commun», on «lit» d'un côté 𓅓𓇋+𓅓 et, de l'autre, 𓅓𓇋+𓅓𓋴 (dans ce cas, il y a deux lignes doubles de séparation, de part et d'autre du signe central).

Fig. 4 CHIC nº 298δ.

29 CHIC nº 283 (AM 1938.793) et CHIC nº 297 (AM 1938.794).

30 Les deux entités ne sont pas mutuellement exclusives (on lit 𓅓𓋴 à la ligne aA de CHIC nº 059 et 𓅓𓇋 aux lignes cB et dA du même document) et le présent excursus tendrait à montrer qu'elles seraient plutôt complémentaires (sans toutefois être équivalentes).

31 CHIC nº 298 (CMS XI nº 14).

Une conséquence intéressante de cette découverte de l'utilisation possible d'une moitié de la face d'un sceau, d'une part, des trois moitiés successives des trois faces d'un sceau de l'autre, est d'envisager avec beaucoup plus d'attention l'authenticité d'un prisme à 3 faces de l'Ashmolean[32] *(Fig. 5)*, suspect stylistiquement, dont chacune des faces porte un seul signe: l'une , l'autre et la troisième ; en combinant la première face avec la seconde, on obtient évidemment + et en combinant la première face avec la troisième on obtient +

Fig. 5 CHIC nº 259.

Nous sommes ici à la fois dans le cas de figure de l'impression de plusieurs faces d'un prisme à trois faces et dans le cas de figure d'utilisation d'un signe médian avec l'un ou l'autre des signes qui lui sont proches (que ce soit proximité sur la même face d'un sceau ou proximité avec l'une des faces adjacentes du même sceau).

Je suis à peu près certain qu'un faussaire n'aurait pas pu imaginer cela et il me semble extrêmement peu probable qu'il soit tombé sur cet arrangement par hasard, surtout lorsque j'aurai précisé que lorsqu'on applique le «tournage standard» à ce sceau, les signes et se trouvent du même côté du prisme, l'un à côté de l'autre (que soit au milieu de la troisième face est peut-être un peu gênant, mais cela a dû être amené par son dessin presque circulaire qui demandait quasi obligatoirement qu'il soit dessiné au centre de la face ellipsoïdale).

Quoi qu'il en soit, tout cela doit nous donner matière à réflexion, et pas seulement en ce qui concerne les possibilités de manipulation et de lecture, puisque cela apporte des arguments en faveur de l'authenticité d'une pièce dont Ingo Pini me disait, le 14 juillet 1992 (après que j'avais fait tourner les sceaux de l'Ashmolean, mais avant que je ne réalise mieux ce que cela nous apportait) qu'il ne lui donnait que 50% de chances de ne pas être un faux.

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32 CHIC nº 259 (Oxford, AM 1938.797).

Deuxième exemple:

Ce deuxième exemple de «tournage standard» rend compte de façon relativement satisfaisante d'une caractéristique «bizarre» d'un autre prisme à 3 faces en jaspe vert de l'Ashmolean [33] *(Fig. 6)*.

Fig. 6 CHIC nº 264.

Il s'agissait d'essayer «d'expliquer» le *pourquoi* de la présence de *trois* «têtes de veau» [34] sur le prisme, une sur chaque face.

Dans la transcription en caractères «normalisés» du CHIC *(Fig. 7)*, avant l'application du «tournage standard», j'avais déjà éliminé la «tête de veau» comme «répétitive» sur les anciennes faces *b* et *c* (je l'avais donc placée entre accolades).

Fig. 7 CHIC nº 264 (transcription normalisée).

33 CHIC nº 264 (Oxford, AM 1938.792).
34 Signe 013 du CHIC (64 de SM I).

J'avais été poussé à le faire parce que le graveur (où plutôt l'auteur du modèle qu'il suivait) avait redoublé, évidemment pour des raisons de «remplissage», des raisons d'*horror vacui*, la «flèche» de l'ancienne face *b*, exactement comme le graveur d'un autre prisme à 3 faces du Metropolitan Museum [35] avait redoublé les «cornes» sur la face α et la «jambe» sur la face β, dans une intention évidemment décorative [36] *(Fig. 8)*.

α β γ

Fig. 8 CHIC nº 262.

Poursuivant la même idée, j'avais décidé que la «tête de veau» n'était un signe faisant partie d'un groupe de signes que sur la face *a*, dans le groupe «croix initiale-tête de veau-lance» [37] et que l'auteur de la composition tripartite avait *réutilisé* la «tête de veau» comme *motif de remplissage* sur les deux autres faces, nous laissant ainsi avec les deux groupes de signes bien connus ♟↑ et ♟𓂀 .

Mais il ne s'agissait que d'une intuition, d'un sentiment personnel.

Le résultat du «tournage standard», qui met les trois «têtes de veau» sur un même plan, un même niveau, m'a fortement réjoui, car il montre que ce signe ne fait pas *vraiment* partie des groupes ♟↑ et ♟𓂀 .

Et cela nous laisse devant deux possibilités:

Première possibilité: ce signe répète devant chaque groupe l'initiale du mot porté sur la face α, la «tête de veau».

Seconde possibilité: ce signe est totalement explétif, simplement appelé par répétition mécanique du premier signe de la face α.

Toutefois, vu la position «sur le même niveau», je pencherais plutôt à l'heure actuelle pour la première possibilité...

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35 CHIC nº 262 (CMS XII nº 117).

36 Cf. J.-P. Olivier in: CMS Beih. 1, 110sq.

37 Quant à la «femme aux bras devant elle» qui figure également sur cette face, elle a aussi été mise entre accolades, dans la mesure où ses dimensions excèdent assez largement celles des deux autres signes; toutefois, étant donné qu'un signe de la «femme» a été identifié une fois sur un document d'archives (CHIC nº 049.δ), il est évident que nous manquons d'éléments pour trancher.

Cependant, il existe, je le signale, des arguments pour la seconde solution, provenant d'autres sceaux, après «tournage standard», mais la place me manque pour les développer ici.

Et, placé devant la même contrainte, je ne présenterai qu'un seul argument en faveur de la première solution: «rappel de l'initiale du groupe de la face α», ce que j'appellerai le «badge acronymique».

Cet argument est tiré d'un document d'un autre type:

Il s'agit du nodule d'argile de Knossos P. 54 [38], où sur la face plane inscrite (γ) figure le groupe , à la suite d'un autre groupe de 2 signes, , «abeille-tamis» (hapax) et conjointement (sur le côté β) au groupe qu'on retrouve sur une empreinte de sceau [39], mais surtout en compagnie, sur la face α, de deux empreintes de sceaux, provenant l'une [40] d'un prisme à 4 faces, l'autre [41] d'un prisme à 3 faces, mais présentant toutes les deux le même groupe , avec cette *seule* différence qu'entre les deux signes figure une fois le signe du syllabaire («trait avec une boule à chaque extrémité»), l'autre fois le signe («tête de veau»).

Comment expliquer cette triple apparition du groupe sur le même document? Tout «nu» quand il est gravé au stylet sur l'argile, «infixé» (chaque fois par un signe du syllabaire différent) lorsqu'il provient d'un sceau (et pas du même sceau, de deux sceaux distincts!)?

La seule explication relativement satisfaisante que je voie pour le moment (à moins de supposer que cet «infixe» ne soit décoratif et explétif, ce que je n'exclus nullement) est qu'il s'agisse d'un «badge acronymique» comme dans l'exemple précédent avec les «têtes de veau».

Pour faire un peu «d'administration-fiction minoenne», je dirais que ce nodule était attaché à quelque chose, sous la garantie sphragistique de deux «détenteurs de sceau» différents rattachés à l'entité « », laquelle entité était indiquée «par écrit manuel» *sans badge* sur la face principale du nodule: preuve évidente, pour moi du moins, que ce qui était écrit au stylet sur l'argile se lisait réellement, analytiquement, tandis que ce qui était porté par un sceau, et par conséquent sur son empreinte, ne se lisait pas réellement, mais globalement, renvoyant au «détenteur du sceau» (peut-être un personnage réel, mais peut-être une «fonction», un «bureau») en tant que garant d'une opération administrative, non en tant qu'auteur actif de cette transaction.

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38 CHIC nº 018.

39 CHIC nº 156 (= SM I P. 51.b; sur SM I P. 51.a [CHIC nº 139] on trouvait le groupe qui figurait également en CHIC nº 003.γ = SM I P. 76.a): il s'agit d'un des nouveaux exemples (trouvés depuis Austin) de groupes de signes identiques gravés sur document d'archives et imprimés par un sceau (l'ancienne lecture - erronée - de CHIC nº 018.β était au lieu de).

L'autre nouvel exemple est donné par le groupe qui figure à la fois sur l'empreinte de sceau CHIC nº 149 de Malia, sur le sceau CHIC nº 197 également de Malia et sur la barre quadrangulaire CHIC nº 059.cB de Knossos [la longue histoire de l'identification correcte du signe de la «mouche» (CHIC nº 021), commencée dans SM I (P. 104.d «flower»), poursuivie dans MU I (nº 22 «trident» et nº 34 «abeille») pour se terminer en 1992 n'est qu'anecdotique et ne mérite d'être évoquée ici que pour montrer que des petits progrès de ce genre ont pu se produire jusqu'à tout récemment et que rien n'interdit d'en envisager d'autres dans un avenir plus ou moins proche, uniquement à partir de l'étude du matériel dont nous disposons].

40 CHIC nº 158.

41 CHIC nº 140.

Sinon pourquoi, sur un si petit document, exprimer trois fois la même notion sémantique? Il fallait bien qu'il y ait une différence de niveau dans la qualité du message:

— *univoque* et *pragmatique* dans le cas de l'inscription gravée;

— peut-être *plus vague* et *symbolique* dans le cas des empreintes de sceaux.

Ceci n'est bien sûr qu'une impression personnelle; l'on sait qu'il existe aussi bien des nodules uniquement gravés et sans empreinte de sceau que des nodules avec empreinte de sceau et sans aucune inscription... et que les deux catégories de documents doivent être expliquées à l'intérieur d'un même système qui comprend majoritairement des nodules portant à la fois inscription(s) et empreinte(s) de sceau...

Espérons, sans trop nous faire d'illusions, qu'elles le seront un jour: en tout cas, la contribution de Judith Weingarten à ce colloque est déjà un pas important dans cette direction. Peut-être la publication du CHIC en sera-t-elle un autre?

En attendant, j'espère vous avoir convaincus au moins d'une chose: que le «tournage standard» des sceaux est quelque chose à ne pas négliger, certainement dans le domaine de l'étude de l'écriture hiéroglyphique crétoise, mais probablement aussi dans celui d'autres domaines de la sphragistique minoenne.

Cela aussi, est une simple question de «bon sens».

'DATA MORGANA' SUR LES SCEAUX 'TALISMANIQUES'

ARTEMIS ONASSOGLOU

Pendant le dernier symposium à Marburg [1], tenu quelques mois après la publication de 'sceaux talismaniques' dans le Beiheft 2 du Corpus des sceaux minoens-mycéniens [2], L. Morgan a présenté une communication sur l'ambiguïté et l'interprétation des motifs (Ambiguity and Interpretation) [3] en mettant encore une fois en question, entre autres, l'ancienne problématique sur les sceaux 'talismaniques', comme s'il ne s'était rien passé entre-temps. Le fait qu'elle cite une ou deux fois la monographie sur les sceaux 'talismaniques' révèle qu'elle la connaissait. A-t-elle voulu la compléter? la corriger? ou bien nier son contenu? Je ne peux pas le dire.

L'ambiguïté (Ambiguity, Zweideutigkeit, Αμφισημία en grec) de Lyvia Morgan fait un titre d'article assez frappant d'une part parce qu'il présume de l'intention du graveur minoen lui-même, d'autre part prévient contre des interprétations monosémiques et hâtives, fondée sur des impressions superficielles de l'archéologue.

L'idée n'est pas tout à fait nouvelle. Dans la mesure où elle se réfère aux motifs 'talismaniques', elle semble d'être influencée par les anciennes thèses de V. Kenna (reprises par la suite sur quelques points par W. Schiering), sur les 'métamorphoses' de certains motifs 'talismaniques'.

D'après elle «an ambiguous image» est «one which gives rise to alternative reactions in the spectator». Elle distingue ensuite deux formes d'ambiguïté, l'ambiguïté subjéctive qui naît de l'interprête et de sa façon de juger (conflicting responses) et l'ambiguïté objective qui naît des données-mêmes, c'est à dire des éléments fournis sur le sceau par le graveur lui-même (conflicting data) [4].

Mais voyons quels sont les cas à travers lesquels L. Morgan reconnaît parmi les motifs représentés sur les sceaux des ambiguïtés subjectives ou objectives: La cause d'une ambiguïté peut-être une cassure de la pierre, l'usure de la surface, la mauvaise interprétation par un dessinateur contemporain du motif, la désintégration d'une forme (probablement à cause d'une erreur technique), l'abréviation ou la réduction d'un motif au strict nécessaire par le graveur, la surface restreinte du sceau qui ne permet pas le développement spatial du motif ou bien la distinction entre différentes scènes qui peuvent se succéder dans le temps ou enfin

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1 Je remercie Marie-Dominique Nenna d'avoir eu la gentillesse d'améliorer la formulation du texte français.

2 Onassoglou, DtS.

3 L. Morgan dans: CMS Beih. 3, 145sq.

4 Morgan, op.cit. (ci-dessus n. 3).

l'entremêlement de deux figures en une; (par exemple un chat sauvage sur un canard n'est pas un 'chacanard' mais l'attaque d'un cannard par un chat). C'est à travers cet entremêlement de motifs que L. Morgan cherche, entre autres, à établir les soi-disants ambiguïtés des motifs 'talismaniques'.

Interpréter est sans doute essayer de dégager ce qui est original et intentionné et de le faire distinguer de ce qui est fortuit. Fortuites sont sûrement la cassure et l'usure d'une pierre; et la désintégration d'une forme par défaut technique, donc ce qui semble être une ambiguïté objective, elle réflète au fond la qualification du chercheur et son aptitude à distinguer les cas fortuits, donc non intentionés, donc d'ambiguïté douteuse. Je me demande par exemple si aux temps héroiques de l'archéologie classique on aurait pu d'une cassure sur un relief interpréter une figure d'Apollon comme un Apollon boiteux. Je crois que la majorité, sinon tous les cas que L. Morgan cite sur l'ambiguïté ne sont que des cas d'ambiguïté subjéctives selon elle, c. à. d. des cas où la qualification du chercheur est mise en cause. Que serait en effect le cas de la mauvaise interprétation d'un dessinateur? Une ambiguïté intentionnée par le graveur ou conçue comme telle par le dessinateur et l'archéologue, son collaborateur?

Je dirais que les dites ambiguïtés de L. Morgan sont fondées sur des interprétations hâtives et insuffisamment raisonnées. C' est une thèse, un avertissement exagéré qui ne conduit la recherche nulle part mais qui au contraire la freine. Son argumentation est basée sur des méthodes d'autrefois et en ce qui concerne les motifs 'talismaniques' (à travers desquels elle essaie de justifier sa thèse) elle se sert d'exemples isolés.

Ce qui a toujours fait le malheur des motifs 'talismaniques' depuis Evans jusqu'à Kenna était qu'ils étaient toujours traités à travers des exemples isolés. Faute d'une publication systématique des motifs 'talismaniques', les interprétations publiées par exemple dans les volumes du Corpus étaient fondées sur les anciennes thèses de Kenna ou sur les impressions optiques des chercheurs.

Les motifs 'talismaniques' sont, Dieu merci, des motifs répétés, ce qui permet de les grouper en unités thématiques. Le fait que les différents exemples appartenant à un groupe thématique ne sont pas typologiquement identiques dans leurs moindres détails, révèle non pas le stade d'ambiguïté, voire de métamorphose comme le dit L. Morgan mais le travail personnel des graveurs qui parfois présentaient le thème en l'enrichissant ou en le réduissant à l'essentiel. Dans un groupement de nombreux motifs typologiquement analogues ceci se laisse suivre à coup sûr. L'isolement de deux ou trois exemples provenant d'un groupe et leur comparaison avec des motifs appartenant à un autre groupe, typologiquement apparentés mais pas analogues risque de conduire à des ambiguïté fictives et à des thèses construites sur des bases douteuses et instables.

Je ne m'attarderai pas ici à répéter comment on est arrivé dans le passé aux différentes intérpretations et dénominations des motifs 'talismaniques'. Ceci a été déjà fait dans les préfaces des groupes thématiques de la monographie citée plus haut [5]. Bien que L. Morgan connaisse cet ouvrage elle persiste dans la critique des vieilles légendes du Corpus qui interprètent certains motifs comme des 'seiches' ('cuttlefish'). Voulant arriver à tout prix à ce

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[5] Onassoglou, DtS.

qui ferait l'Ambiguïté des motifs 'talismaniques', elle groupe six motifs interpétés dans les volumes du Corpus comme des seiches — les deux d'entre eux d'ailleurs avec «perhaps» (c et e) [6]. Par la suite, elle se demande comment on peut comparer cette forme avec une vraie seiche, dont une photo figure dans l'article, présentant la seiche couchée ou en train de nager et vue de côté [7], tandis que les figures sur les sceaux présentent l'animal de manière frontale et avec une simplicité du dessin semblable à celle qu'on trouve sur des livres d'histoire naturelle ou sur des dessins d'enfants [8]. Les trois exemples c, e et f pour lesquels L. Morgan se demande comment on peut y voir des seiches, et bien ce ne sont pas des seiches. Ils représentent tout autre chose qu'une seiche, comme on l'a prouvé d'une maniére assez détaillée dans le Beiheft 2 du Corpus [9]. L'exemple 'c' se laisse intégrer dans le groupe du 'Paneel'. Le 'f' formé d'un corps arrondi et de tentacules avec de petits cercles qui trompent L. Morgan, n'est qu'un octopode. Quant à l'exemple 'e', son motif doit faire partie du groupe des exemples uniques (unica-'isoliert'). En effet, pendant le travail, une large cassure au milieu de la surface a dû être camouflée par deux cercles. Une autre cassure au bord du sceau rend plus difficile le déchiffrement du motif qui est placé plus haut.

L. Morgan se demande «which unit is taken to be the determining factor» à propos de la figure de seiches. Ceci n'est pas difficile à préciser lorsqu'on a à examiner non pas sept ou huit exemples mais cent quatre: le corps ellipsoïdal, les tentacules en forme de S et les nageoirs sur la tête se répètent sur 98% des exemples. Si parfois tentacules, parfois nageoires manquent (2% des cas), ceci ne pèse en rien sur l'interprétation des 98% restants. Donc L. Morgan s'en soucie à tort. Le cercle qui représents l'oeil, le demi-cercle qui rend la ligne de séparation entre la tête et le corps (Mantelhöhle) sont presque toujours présents (sur un 90 à 95%) afin de mieux définir la figure. Parfois le graveur voulant imiter de plus près la nature représente les deux yeux. Est-ce une raison pour se demander, comme fait L. Morgan, si tous les autres seiches seraient monoculaires? On pourrait aussi se poser la question à propos des représentations de char gravé sur un sceau avec une roue au lieu de deux.

Avec ces éléments, qui sont toujours présents, le graveur des sceaux 'talismaniques' prend une certaine liberté et joue avec ces derniers: il multiplie les demi-cercles sur le corps, les renverse ou les arrange symmetriquement, il supprime les demi-cercles en bas des tentacules, il ordonne les nageoires de la tête en les figurant par groupes de deux ou trois lignes, parfois il les répète en bas du corps essayant d'évoquer les nageoires du cousin de la seiche, le calamar (loligo vulgaris). Ainsi il donne une preuve vive de son esprit de symétrie. Ce sont là des initiatives personnelles que le graveur se permet, mais qui ne modifient pas le sens primaire de la figure. Une ou deux fois sur cent quatre exemples, le graveur se permettant des fantaisies donne aux nageoires la forme des branches ou d'une fleur. Essaie-t-il de nous

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6 Morgan, op.cit. (ci-dessus n. 3) 153. 154 Fig. 13a–f.

7 Morgan, op.cit. (ci-dessus n. 3) 153 Fig. 12.

8 Onassoglou, DtS Pl. XXI–XXVI.

9 Onassoglou, DtS 57sq. Voir aussi sur les exemples de L. Morgan, op.cit. (ci-dessus n. 3) 154 Fig. 13c.e.f. Onassoglou, DtS 71 Pl. XXVII: OK-2; 99sq. Pl. XXXVIII: PN-19; 165 Pl. LXIV: Is-28 et les préfaces des groupes; 68sq. (sur le motif 'Oktopus'), 99sq. (sur le motif du 'Paneel'-Bündel) et 163sq. (sur les motifs isolés: 'Isolierten').

faire passer un message ou tout simplement fait-il preuve d'une sorte de manierisme? Je ne saurais pas le dire. La multiplication et accentuation des formules en dépit de la fidélité à la nature, le souci obstiné de la symétrie et plus rarement la contamination typologique entre des motifs différents mais typologiquement plus ou moins apparentés se rencontrent dans la famille 'talismanique' et font partie de l' 'idiotisme talismanique' [10].

Je ne m'attarderai pas à répéter pour quelles raisons les exemples que L. Morgan ne sait pas interpréter et qui figurent entre les figures 16 et 20, de son article font parti les uns (Fig. 16a.b et 17) du groupe des 'crabes', les autres (Fig. 18 à 20a.b) des 'octopodes' [11]. Ces deux groupes se laissent bien définir et distinguer typologiquement entre eux, par un certain nombre d'exemples [12]. Dans chaque groupe, on signale même des irrégularités et des variations sur le type dans la mesure où le type fondamental subit des enrichissements ou des abréviations et où un élément est parfois accentué aux dépens des autres. Ce sont des phénomènes qui peuvent être attribués à différentes mains ou ateliers. Le caractère particulier des motifs 'talismaniques' s'y révèle bien. Même des gravures réalisées en série comme les motifs 'talismaniques' étaient faits non pas par des «ouvriers à la chaîne» (am Fließband) mais par des individus.

L. Morgan croit de plus que l'orientation d'un motif vers un sens ou un autre est une cause d'ambiguïté parce qu'il conduirait à des interprétations différentes. Ainsi en tournant les motifs CMS II,3 n° 47 de Gypsades et n° 31a de Mavro Spileo, dans un sens, elle croit dans l'un voir des oiseaux, dans l'autre des plantes [13]. Ceci semble être une idée un peu 'à l'oeuf de Colomb': on peut le faire tenir debout en tout sens bien que cassé. Mais le but dans la recherche des motifs 'talismaniques' n'est pas de signaler les dangers que courent les chercheurs hâtifs, mais d'établir une méthode sûre qui conduit à des résultats clairs. Ainsi l'analyse typologique des deux motifs cités plus haut et leur comparaison minutieuse avec un grand nombre de motifs, les fait intégrer le premier dans le groupe thématique des plantes [14], l'autre dans celui des poissons [15] et même dans la variante des poissons volants.

Selon L. Morgan des motifs comme les plantes et les poissons «whose meaning is dependent on orientation are subject to what is termed 'perceptual causation'». Ainsi, devant l'interprétation arbitraire du chercheur, l'intention du graveur de représenter un motif concret s'effacerait et ce qui pèserait serait l'intention du graveur de mettre en mouvement la fantaisie de l'archéologue. Il existe de tout façon des chemins plus positifs pour scruter l'intention du graveur comme par exemple se servir d'une typologie établie à partir d'un grand nombre de

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10 C'est p. ex. à propos du motif PN-52 (Onassoglou, DtS 100 Pl. XXXIX) que j'ai parlé d'une «formale Anspielung des 'Paneels' auf das 'Sepia'-Motiv». Voir aussi ma communication sur les «Kombinationen der 'talismanischen' Siegel» dans CMS Beih. 1, 117sq., et surtout 120 n. 13; 130 nos 44–47; 133 Fig. 4 nos 44–47.

11 Morgan, op.cit. (ci-dessus n. 3) 155sq. Fig. 16a.b–20a.b.

12 Onassoglou, DtS 68sq. Pl. XXVII; 74sq. Pl. XXVIII.

13 Morgan, op.cit. (ci-dessus n. 3) 156sq. Fig. 21a.b; 23a.b.

14 Onassoglou, DtS 35sq. Pl. XV: SP-35.

15 Onassoglou, DtS 154 n. 891. Je ne suis pas d'accord avec l'interpétation donnée au motif dans le Corpus (CMS II,3 n° 31a) comme «stilisierter Vogel mit geschwungenen Flügeln nach oben fliegend». Sur la typologie de l'oiseau ('Vogel'-Motiv), voir Onassoglou, DtS 141 et sur celle des poissons ('Fisch'- Motiv) ibid. 156sq.

motifs semblables ou apparentés et de leurs éléments permanents, afin d'éviter le «circular process» qui fait que les «relevant features depend on what the image is thought to represent».

Une fois que les groupes typologico-thématiques et leurs variantes — produits de divers ateliers — sont établies, on peut distinguer des types uniques qui ne se laissent pas insérer dans les groupes. Il est plus raisonnable d'en faire une catégorie de types isolés, comprenant des exemples qui, les uns se servent du style 'talismanique' pour représenter une figure tout à fait neuve, les autres, bien qu'ils rappellent typologiquement certains motifs, sont en effet différents.

Je m'obstinerais à me servir de la ressemblance de ces derniers avec un motif concret pour leur accorder un nom, même entre guillements et les inscrire dans un groupe comme variantes: ils ne sont que des cas uniques. Ces cas uniques et isolés sont en somme la seule concession que je pourrais faire à l'idée de Morgan sur les prétendues 'ambiguïtés' qui n'ont pas d'aussi graves conséquences qu'elle le prétend. «It is a need for a grammar of forms» exige L. Morgan. Je me permettrais ici de dire qu'en ce qui concerne les motifs 'talismaniques' «there is already one ... it is also a need for scholars to be patient and cautious».

DIE SPÄTMINOISCHE WEICHSTEINGLYPTIK

INGO PINI

Unter der spätminoischen Weichsteinglyptik werden hier Siegel aus relativ weichen lokalen Steinen (meist Serpentin und Schiefer, in der älteren Literatur häufig als Steatit bezeichnet) zusammengefaßt, deren Motive überwiegend mit dem Stichel geschnitten und geschabt wurden. Bis in die heutige Zeit haben Archäologen spätbronzezeitliche kretische Siegel dieser Art in die Spätphase (SM IIIA–B) datiert. Sie folgten damit mehr oder weniger stillschweigend den Vorstellungen, die Sir Arthur Evans von der stilgeschichtlichen Entwicklung der Glyptik verbreitet hatte. Außer der allgemeinen Annahme einer solchen Entwicklung wurden keine weiteren Begründungen dafür bekanntgegeben. Vertreter dieser Richtung waren vor allem V.E.G. Kenna [1], J. Boardman [2] und N. Platon [3]. Abdrücke von Weichsteinsiegeln sind eindeutig bezeugt auf SM I-Tonplomben aus Zakros und Aj. Triada [4]. Weichsteinsiegel wurden auf Kreta kontinuierlich von FM II bis Spätminoisch III geschnitten. Auf die Problematik von Datierungen der spätminoischen Weichsteinsiegel wurde bereits 1982 eingegangen [5]. Seinerzeit hatte ich erstmals darauf hingewiesen, daß Siegel aus bestimmten Kontexten in Ostkreta (z.B. aus Mochlos, Gournia und Kato Sakros) zuverlässige Hinweise auf eine Frühdatierung von spätminoischen Weichsteinsiegeln bieten [6]. Grundlage für die Spätdatierung einiger Exemplare war und ist vor allem die Glyptik aus der Nekropole von Armeni, die ausschließlich aus SM IIIA/B-Kontexten stammt. Auf ausgewählte Siegel dieser Gruppe soll in den Referaten von W. Müller und mir noch näher eingegangen werden. Ausführlicher habe ich die Problematik der Differenzierung früher und später spätminoischer Weichsteinglyptik in der Einleitung zu CMS II,4 erörtert. In diesem Band sollte nach N. Platon's Auffassung die nachpalastzeitliche Glyptik veröffentlicht werden. Tatsächlich enthält er aber überwiegend

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1 Vgl. die in den von ihm bearbeiteten Bänden des CMS angegebenen Datierungen, ferner etwa ders. in: Pepragmena 2, 189ff.

2 J. Boardman in: Antichità Cretesi, Studi in Onore di Doro Levi I (Cronache di Archeologia 12/13, 1968) 116ff.

3 CMS II,4.

4 Die Abdrücke auf den Tonplomben aus Haus A von Zakros stammen überwiegend von Siegeln aus weichen Materialien, desgleichen etliche Beispiele aus Aj. Triada. Dies haben in den vergangenen Jahren eingehende Untersuchungen dieser Fundkomplexe zur Vorbereitung der Bände CMS II,6 und II,7 ergeben.

5 I. Pini, BICS 29, 1982, 130. s. dazu auch J.H. Betts in: M. Popham, The Unexplored Mansion at Knossos, BSA Suppl. 17 (1984) 188; ferner J.G. Younger, Aegean Seals II, 118.

6 Mochlos muß mittlerweile wieder ausgeschiedenen werden, da die neusten Grabungen von J. Soles auch eindeutige Bauaktivitäten in SM IIIA ergeben haben.

Stücke aus der Frühphase der Spätbronzezeit und etliche Beispiele, die sich bislang zeitlich nicht genauer einordnen lassen. Gestützt wird diese Erkenntnis unter anderem durch die Zusammenstellung der für die Chronologie der neu- und nachpalastzeitlichen Glyptik relevanten Siegelfunde, die ich in der genannten Einleitung veröffentlicht habe [7]. Nicht alle der dort aufgeführten Befunde können als sichere Stützen für das chronologische Gerüst dienen. Doch sie bieten zumindest diskutierbare Anhaltspunkte.

John G. Younger hat als einziger den Versuch einer umfassenden chronologischen Ordnung der spätminoischen Weichsteinglyptik unternommen. Er kam in einer Serie von Aufsätzen, die seit 1983 im Kadmos erschienen [8], zu einer ähnlichen Beurteilung. Für die Scheidung der frühen von der späten spätminoischen Weichsteinglyptik konnte auch Younger neben seinen Auflistungen in verschiedenen Gruppen kaum überzeugende allgemeingültige Kriterien liefern. Zu Recht weist er darauf hin, daß die Unterschiede zwischen Vertretern der frühen und der späten Zeitstufe sehr subtil sind. Verwirrend ist Younger's Benennung der frühspätminoischen Weichsteinglyptik als 'Cretan Popular Group'. Nahegelegen hätte es, seine späte 'Armeni Group' so zu benennen, die zeitlich, thematisch und bis zu einem gewissen Grad auch kompositionell eher der 'Mainland Popular Group' aus den Phasen SH IIIA2–C entspricht.

Da die spätminoische Weichsteinglyptik etwa 1000 Siegel, d.h. ca. 10% der gesamten gegenwärtig bekannten Siegelflächen (auf Originalen und Abdrücken) der ägäischen Bronzezeit umfaßt, sollte die Erarbeitung eines nachvollziehbaren, verständlichen chronologischen Gerüsts für diese umfangreiche Siegelgruppe eines der vorrangigen Ziele der Forschung auf diesem Gebiet bleiben. Chronologische Listen mögen nützlich sein. Erforderlich ist parallel dazu aber immer auch eine ausführliche Begründung, durch welche die Zuordnung erst verständlich und einsichtig wird. Das Vorgehen von Beazley zur chronologischen Ordnung der schwarz- und rotfigurigen Vasenmalerei läßt sich nicht ohne weiteres auf die bronzezeitliche Glyptik übertragen.

Zu den 43 in CMS V veröffentlichten Stücken aus der Nekropole von Armeni kommen 114 weitere aus den neueren Grabungen, die in CMS V Suppl. 1B veröffentlicht werden. Etliche dieser Siegel sind zweifellos von beträchtlicher Bedeutung für unsere Beurteilung der Stilentwicklung der spätminoischen Weichsteinglyptik. Doch sind die Siegel stilistisch keineswegs einheitlich. Darunter befinden sich auch zahlreiche sehr wahrscheinlich frühere Stücke aus harten Steinen sowie zahlreiche Siegel mit ornamentalen Motiven.

Die bisherige Sichtung des Materials hat ergeben, daß die Bildthemen und die Zahl der verschiedenen Kompositionen in der Weichsteinglyptik erheblich geringer sind als in der Hartsteinglyptik. Innovationen scheinen, was nicht verwunderlich ist, überwiegend von Graveuren ausgegangen sein, die Siegel aus harten Steinen geschnitten haben.

W. Müller und ich werden in unseren Beiträgen ausgewählte Bildthemen näher untersuchen und prüfen, inwieweit sich Kriterien zumindest für frühe und späte Gruppierungen innerhalb der Spätbronzezeit finden lassen. Grundlage für unsere Untersuchungen sind sämtli-

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7 CMS II,4 S. XXVIIIff.

8 s. J.G. Younger in: CMS Beih. 4, 78f.

che bis heute veröffentlichten spätminoischen Weichsteinsiegel. Wie schon J.G. Younger und J.H. Betts erkannt haben, lassen sich Darstellungen verschiedenartiger Tiere in unterschiedlichen Posen stilistisch nur sehr bedingt miteinander vergleichen. Wir konzentrieren unsere Untersuchungen auf ausgewählte Bildthemen. W. Müller untersucht die Boviden und Capriden, während ich mich mit den Löwendarstellungen beschäftige. Weitgehend unberücksichtigt bleiben Motive, die entweder schlecht erhalten oder aber von geringer Qualität sind. Sie lassen sich nur in den Fällen einer Stilgruppe überzeugend zuordnen.

BEMERKUNGEN ZUR DATIERUNG VON LÖWENDARSTELLUNGEN DER SPÄTMINOISCHEN WEICHSTEINGLYPTIK

INGO PINI

Durch äußere Umstände datierte Siegel derselben Herstellungszeit sind stilistisch nicht selten so unterschiedlich, daß sich gemeinsame Merkmale eines Zeitstils kaum feststellen lassen. Um wenigstens gewisse Anhaltspunkte für die Chronologie zu erhalten, wird daher in der folgenden Untersuchung von der Arbeitshypothese ausgegangen, daß identische Bildthemen, d.h. dieselben Motive in denselben Kompositionen und mit denselben Posen, in der Regel nur eine zeitlich begrenzte Laufzeit hatten. Dieselben Bildthemen wurden also nicht mehrere Jahrhunderte hindurch verwendet. Eine vollständige Erörterung aller vorhandenen Darstellungen und ihre stilistische Einordnung kann in dem vorgegebenen Rahmen nicht geboten werden und wird auch nicht angestrebt. Vielmehr sollen hier Wege aufgezeigt und Anregungen gegeben werden.

Begonnen wird mit dem Bildthema der beiden wirbelförmig angeordneten gelagerten Löwen, das J.H. Betts behandelt hat [1]. Sein Schwerpunkt lag auf der Erörterung der Jaspissiegel. Die Zuweisung etlicher im Detail stilistisch unterschiedlicher Darstellungen mit diesem Bildthema an einen Meister, die er vertritt, erscheint wenig wahrscheinlich [2]. Überzeugend konnte Betts dagegen nachweisen, daß alle diese Motive in SBZ I zu datieren sind. Sie lassen sich anschließen an mehrere datierte Stücke, die innerhalb der Gruppe wie auch zu anderen Löwendarstellungen Kreuz- und Querverbindungen erlauben. Die für den Zeitansatz entscheidenden Beispiele kamen aus Aj. Irini auf Kea [3], aus dem Grab Anjelopoulou 8 bei Volimidia in Messenien [4] und aus Akrotiri auf Thera [5]. Sie stammen alle aus SM IB-Kontexten.

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* Die Fülle des Materials kann in dem zur Verfügung stehenden Rahmen nur ausschnittweise behandelt werden.

Die Abbildungsvorlagen wurden vom Verfasser angefertigt. J.A. Sakellarakis gab dankenswerterweise die Publikationserlaubnis für *Abb. 1a* (HM 2645).

Außer den im Abkürzungsverzeichnis zusammengestellten Abkürzungen werden hier die folgenden verwendet:

HM Iraklion, Archäologisches Museum
OAM Oxford, Ashmolean Museum
SBZ Spätbronzezeit

1 J.H. Betts in: CMS Beih. 1, 5ff. Abb. 3–10.

2 Dem Argument von Betts, die von ihm behandelten Gemmen wären alle in dem gleichen Matertial – rotem Jaspis – graviert, läßt sich entgegen halten, daß für bestimmte Bildthemen häufig dasselbe bzw. das gleiche Material gewählt wurde.

3 CMS V Nr. 493.

4 CMS V Nr. 304.

Abb. 1a–d a) HM 2645 aus Archanes/Phourni; b) CMS IX Nr. 143; c) CMS V Suppl. 1B Nr. 81; d) Sakellariou, CollGiam Nr. 297 = Inv. Nr. 3558.

Während Betts überwiegend Exemplare der Hartsteinglyptik behandelte, konzentriert sich die vorliegende Untersuchung auf entsprechende Wiedergaben in der Weichsteinglyptik.

Ausgegangen wird von einem Serpentin-Lentoid aus Gebäude 4 von Archanes/Phourni, das nach Angabe von Sakellarakis in einem SM I-Kontext gefunden wurde *(Abb. 1a)* [6]. Diesem Siegel lassen sich trotz einiger Unterschiede in der Detailwiedergabe weitere stilistisch eng verwandte Darstellungen anschließen *(Abb. 1b–d)* [7]. Während die auf Hartsteinsiegeln im Wirbel angeordneten Löwen im Fliegenden Galopp wiedergegeben sind, dominiert auf den Serpentinsiegeln der gelagerte Löwe, wie bereits Betts erkannt hatte [8]. Das besondere Merkmal des Löwentypus dieser Gruppe ist die Angabe des Kopfes: das obere Ende des Halses wird durch eine Lünette bzw. einen Kreis mit Mittelpunkt gegenüber der Mähnenpartie abgesetzt. Die Maulpartie fehlt in der Regel. Die Mähne besteht aus längeren, anscheinend von einem Punkt ausgehenden Strichen. Nur das Beispiel *Abb. 1b* weist eine

5 CMS V Nr. 690.
6 J. Sakellarakis, Prakt 1977, 475 Abb. 5 (HM Inv. 2645).
7 Vgl. ferner HM CollGiam 3630 (unpubliziert).
8 Betts a.O. (oben Anm. 1) 5 Anm. 18.

Abb. 2a–d a) CMS II,3 Nr. 348; b) CMS I Suppl. Nr. 94a; c) CMS XIII Nr. 125; d) CMS II,4 Nr. 66.

zwar entsprechend angeordnete, aber eher gepunktete Mähne auf. Die Körperauffassung ist in allen vier Fällen sehr ähnlich. Charakteristisch sind die leicht nach unten gebogenen Vorderläufe, die in grob angedeuteten, nach unten leicht abgewinkelten Pranken enden. Hervorgehoben werden muß die Provenienz des Siegels *Abb. 1c* aus einem Grab in der Nähe von Mykene. Das Beispiel ist als einer der seltenen Belege für den Export spätminoischer Weichsteinsiegel anzusehen. Die Körper der Löwen *Abb. 2a* wirken wie aufgeblasen [9]. Ihre Köpfe bestehen aus je einem Punktauge und einem schnabelförmigen Maul. Auf dem zweiseitig gravierten Lentoid *Abb. 2b* wurden die Löwenköpfe jeweils durch eine Leiste wiedergegeben, auf deren Enden Punkte zur Angabe von Augen und Maul aufgesetzt sind. Ein gerader Strich setzt diese Partie von der Mähne ab, die durch zwei Gruppen unterschiedlich ausgerichteter längerer, annähernd paralleler Striche wiedergegeben ist [10]. Bauch und Rücken der Tiere auf beiden Siegeln sind durch Leisten konturiert. Dieses Phänomen begegnet häufig in der Frühphase der Spätbronzezeit, wie W. Müller gezeigt hat [11].

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9 Eine gewisse Stilverwandtschaft weist das Hämatitsiegel Sakellariou, CollGiam Nr. 301 auf.

10 Die Löwendarstellung *Abb. 2a* datiert auch die Greifenwiedergabe auf Seite b desselben Siegels (CMS I Suppl. Nr. 94b).

11 s. oben S. 152ff.

a

b

Abb. 3a–b a) CMS XI Nr. 97; b) CMS I Suppl. Nr. 93.

Da aus SM I-Kontexten auch sehr mäßige Arbeiten mit dem genannten Bildthema bekannt sind wie etwa der Abdruck eines Weichsteinsiegels auf einer Tonplombe aus Haus A von Kato Sakros [12], erscheint es legitim, weitere, stilistisch uneinheitliche Darstellungen anzuschließen *(Abb. 2c.d)*. Die Löwen auf diesen beiden Siegeln sind nur schwer als solche erkennbar; auch können sie nicht stilistisch in die Nähe von anderen Wiedergaben gestellt werden [13]. Von den bisher betrachteten Darstellungen weichen die einander sehr nahe stehenden Beispiele *Abb. 3a* und *b* trotz mancher Gemeinsamkeiten stilistisch beträchtlich ab. Die Köpfe der Löwen sind grob mit drei im Dreieck angeordneten Linien, aber mit einer offenen Ecke zum Maul hin gestaltet. Das Maul ist durch zwei Punkte markiert [14]. Wegen der Stilunterschiede können die hier erörterten Weichsteinsiegel mit dem Bildthema der beiden Löwen kaum als Arbeiten eines Graveurs oder einer Werkstatt angesehen werden.

Die Merkmale der Gruppe um das Beispiel aus Archanes *(Abb. 1a)* gelten weitgehend auch für Wiedergaben einzeln gelagerter Löwen *(Abb. 4a.b)*. Das Lentoid *Abb. 4a* stammt aus dem Südhaus von Knossos und ist wahrscheinlich in SM I zu datieren [15]. Entsprechende Löwendarstellungen in mehrfigurigen Kompositionen bieten auch Anhaltspunkte für die Datierung anderer Tiere, z.B. auf dem Siegel OAM 1971.1137 *(Abb. 4c)* [16]. Angeschlossen sei

12 D.G. Hogarth, JHS 22, 1902, 87 Nr. 115 Taf. X.

13 Dies gilt auch für die folgenden Beispiele: CMS II,3 Nr. 347; II,4 Nr. 66; VII Nr. 238; VIII Nr. 79; X Nr. 155; XIII Nr. 125; Sakellariou, CollGiam Nr. 296. 298–300.

14 In ähnlicher Weise sind die Löwenköpfe auf dem Achatlentoid Kenna, CS Nr. 245 aus Knossos wiedergegeben.

15 s. Verf. CMS II,3 S. XXXI.

16 z.B. *Abb. 4c* = OAM 1971.1137 (J. Boardman in: Antichità Cretesi. Studi in onore di D. Levi I (Cronache di Archeologia 12 [1973]) 119 Nr. 8 Taf. XIII Abb. 2); ferner J.H. Betts in: M. Popham, The Unexplored Mansion at Knossos, BSA Suppl. 17 (1984) 193 Nr. 2 Taf. 187b. Mit Betts halte ich es für möglich, daß das letztere Beispiel möglicherweise geringfügig später zu datieren ist. Den Löwen aus dem Beginn der Spätbronzezeit

Abb. 4a–d a) CMS II,4 Nr. 117; b) CMS II,4 Nr. 49; c) OAM 1971.1137; d) CMS IV Nr. 285.

hier die Darstellung eines Tierüberfalls auf einem Exemplar der Sammlung Metaxas *(Abb. 4d)*. Diese Wiedergabe wurde von Younger richtig seiner 'Cretan Popular Group' zugeschrieben [17]. Nahezu dasselbe Schema der Beißergruppe hatte bereits J.H. Betts in einigen SM I-Darstellungen erkannt [18]. Eine entsprechende Komposition auf dem Karneollentoid CMS V Nr. 428 aus einem Grab bei Nichoria wird von Younger indes seiner 'Group with Crossed Hocks' (ca. 1375-1350 v.Chr., also SH IIIA1) zugewiesen [19]. Plausibler erscheint mir trotz vermutlich materialbedingter stilistischer Unterschiede im einzelnen die zeitliche Nähe all dieser Überfallszenen, in denen der Löwe das Opfer über sich in der Luft im Maul gepackt hält. Der Kontext des Karneolsiegels (SH I/II–IIIB) steht einer Frühdatierung nicht entgegen. Schließlich sei hingewiesen auf zwei durch den Kontext in SM I datierte Siegelabdrücke auf Tonplomben aus Kato Zakros [20], die möglicherweise von Weichsteinsiegeln stammen, aber stilistisch keinen engen Bezug zu den hier erörterten Originalen aufweisen.

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stehen auch die Beispiele CMS II,4 Nr. 73; XII Nr. 243 und Sakellariou, CollGiam Nr. 291 nahe, auf denen jeweils neben einem relativ groß wiedergegebenen Rind ein auf der Peripherie gelagerter kleiner Löwe erscheint.

17 Younger, Aegean Seals II, 124 unter Lions b) Miscellaneous.

18 Betts a.O. (oben Anm. 1), 9f. Abb. 11–14.

19 Younger, Aegean Seals VI, 59f.

20 D.G. Hogarth, JHS 22, 1902, 87 Nr. 109 Taf. IX; D. Levi, ASAtene 8/9, 1925/26, 169 Nr. 155 Abb. 193 und Taf. XVI. Das erstgenannte Beispiel zählt J.G. Younger, Aegean Seals III, 48 (a). zur Frühphase seines 'Mycenae-Vapheio Lion Master' in SM IA–B.

Abb. 5a–d a) CMS II,4 Nr. 79; b) CMS VII Nr. 197; c) CMS XI Nr. 222; d) CMS XI Nr. 50.

Es wurde gezeigt, daß die Wirbelkomposition der zwei Löwen in der SM I-Glyptik aus lokalen weichen Steinen – meist Serpentinarten – ein beliebtes Bildthema war. Die Ausnahme von der Regel bildet das heute verschollene Lentoid CMS XI Nr. 307 aus 'rotem Flußspath', das zwei entsprechende Löwen mit extrem weit ausgreifender Schrittstellung der Hinterbeine wiedergibt. Pranken, Gelenke, Maulspitzen und Unterkiefer sind durch größere Bohrmarken angegeben, die einzelnen Mähnenzotteln durch kleinere Bohrmarken, die Augen durch Kreise. Diese auf Weichsteinsiegeln relativ seltenen Bohrungen sowie der für Siegel mit diesem Bildthema überdurchschnittlich große Durchmesser von 2,25 cm weisen auf eine Entstehung des Stücks in SM II–IIIA1 hin.

In einem anderen, innerhalb der Weichsteinglyptik weit verbreiteten Bildthema, das ich, vielleicht nicht ganz glücklich, einmal als 'Chimära-Typus' bezeichnet habe, erscheint über dem Rücken eines Vierfüßlers das Vorderteil eines anderen in entgegengesetzter Richtung [21].

[21] Innerhalb der Hartsteinglyptik begegnet der 'Chimära-Typus' mehrfach vor allem im sogenannten Cut-Style; vgl. z.B. CMS IV Nr. 16D(?); V Nr. 725. 750; IX Nr. 16D; X Nr. 264. Ausnahmen sind CMS I Nr. 115. 183; V Suppl. 1A Nr. 201 (SM II–IIIA1) und HM 2085 von der 'Royal Road Excavation'.

Es überwiegen Darstellungen mit einem Löwen und dem Vorderteil einer Ziege *(Abb. 5a.b.d)* [22]. Dieses Bildmotiv kam in SM I auf und blieb vermutlich bis in die folgende Phase hinein beliebt. Innerhalb des Bildfeldes konnten die Tiere nahezu beliebig vertauscht werden. So wurde z.B. als vorderes Tier ein Rind und als hinteres ein Löwe [23] oder als vorderes ein Löwe und als hinteres ein Hirsch *(Abb. 5c)* [24] bzw. ein Greif [25] oder ein Rind [26] dargestellt. Dazu gerechnet werden müssen ferner Darstellungen mit zwei Löwen in entsprechender Komposition [27]. Unverkennbar sind auf den beiden Darstellungen *Abb. 5a.b* die Merkmale der bereits erörterten gelagerten Löwen, vor allem der annähernd kreisförmige Kopf und die nach unten gebogenen Vorderläufe mit abgewinkelten Pranken [28]. Innerhalb des 'Chimära-Typus' kann man als eine Variante Darstellungen zusammenschließen, die der ersten verwandt sind, aber dennoch kleine Unterschiede aufweisen. Wesentliches Unterscheidungsmerkmal ist die charakteristische langgezogene Nasenrücken/Oberkiefer-Partie der Löwen *(Abb. 5c.d)* [29]. Die Darstellungen *Abb. 5c* und *d* stehen einander so nahe, daß man geneigt ist, von derselben Hand zu sprechen [30]. Von den Siegeln der 'Cretan Popular Group' weisen die hier erörterten des 'Chimära-Typus' mit ihrer präzisen Ausführung meist eine gewisse Qualität auf. Die Mähne wirkt, als ob sie mit einem Magneten ausgerichtet ist. Wie ich zu zeigen versucht habe, dominiert das Bildthema in den Phasen SBZ I–II. Das extrem flüchtig geschnittene Exemplar CMS V Suppl. 1B Nr. 255 aus der SM III-Nekropole von Armeni stellt die Ausnahme von der Regel dar [31].

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22 Vgl. die verwandten Motive CMS II,4 Nr. 79. 178; ferner CMS IV Nr. 276; V Nr. 511; VIII Nr. 80; X Nr. 153; XI Nr. 50; Sakellariou, CollGiam Nr. 288. 289.

23 Vgl. z.B. CMS V Nr. 511; J. Day, AJA 30, 1926, 442 Abb. 1; A. Ioannidou-Karetsou, Prakt 1976, 415 Taf. 231a (= HM 2621); Prakt 1978, 255 Taf. 169b–g. Auch das Achatlentoid CMS I Nr. 183 ist sehr wahrscheinlich später zu datieren als Younger, Aegean Seals IV, 65 unter The Keos-Berry Lion Group annimmt, der als Entstehungszeit das erste Viertel des 15. Jhs. vorschlägt.

24 Vgl. ferner CMS V Nr. 222.

25 Vgl. z.B. CMS VII Nr. 198; HM 2397.

26 Vgl. z.B. Sakellariou, CollGiam Nr. 308.

27 z.B. CMS V Suppl. 1B Nr. 91 oder Sakellariou, CollGiam Nr. 287 = Inv. 3065.

28 Vgl. ferner auch CMS X Nr. 150.

29 Vgl. auch das Siegel Ioannidou-Karetsou, Prakt 1976, 415 Taf. 231a; das Siegel mit einem Dm von 2,25 cm ist vermutlich bereits in SM II–IIIA1 zu datieren. Vgl. ferner Sakellariou, CollGiam Nr. 287; CMS I Nr. 504; V Nr. 222; X Nr. 150, auf letzterem indes nur schwach erkennbar. Nahe steht vermutlich auch der Löwe CMS II,4 Nr. 1.

30 Die Übereinstimmungen gehen bis in die nach oben abgewinkelten Vorderhufe der Ziegen. Die langgezogene Nasenrücken/Oberkiefer-Partie ist auf dem Siegel *Abb. 5d* nur noch sehr schwach zu erkennen. Entfernt verwandt ist auch CMS V Nr. 222. Younger, Aegean Seals II, 124 unter Lions: a) gibt den Kontext dieses Siegels mit SH I–II an; doch stammt aus demselben Fundzusammenhang das Lentoid CMS V Nr. 221, das er seiner 'Island Sanctuaries Group' (SBZ) zuweist (Aegean Seals VI, 63 Nr. 5). Wegen des größeren Dm von 2,5 cm und der relativ sogrfältigen Bearbeitung ist CMS V Nr. 222 vermutlich nicht vor SBZ II entstanden.

31 Zu den Siegeln aus Armeni ist anzumerken, daß sie teils aus SM IIIA-, teils aus IIIB-Kontexten und teils aus Gräbern ohne datierende Beigaben stammen. In letzteren Fällen wird allgemein eine Zeitspanne von SM IIIA–B angenommen. Eine stilistische Differenzierung zwischen Siegeln aus SM IIIA- und IIIB-Befunden erscheint gegenwärtig nicht möglich. Vgl. auch die abweichende Komposition des SM III-Siegels CMS I Suppl. Nr. 95.

Abb. 6a–c HM 2772 aus Knossos, Unexplored Mansion; b) HM 2123 aus Knossos, Royal Road; c) CMS II,4 Nr. 175.

Die Löwendarstellung HM 2123 aus der Royal Road-Grabung in Knossos [32] *(Abb. 6b)* ist durch den Kontext in SM IB datiert. Die sehr plastische Wiedergabe in relativ hohem Relief und die gleichsam aus der Rumpfkante herauswachsenden Vorderbeine stehen bislang isoliert. Bemerkenswert erscheint die Tatsache, daß über dem Rücken des Tieres viel freier Raum bleibt für die Wiedergabe eines Pflanzenmotivs, das nahezu identisch in 'talismanischen' Motiven, leicht abgewandelt aber auch über der Löwendarstellung *Abb. 6c* wiederkehrt. Der Grund über einigen Löwendarstellungen auf Weichsteinsiegeln, die m.E. auch aus dem Beginn der SM-Periode stammen, ist mit einem Sonnen- bzw. Sternmotiv [33] gefüllt, das auch in anderen gleichzeitigen Motiven erscheint [34]. Pflanzenmotive über dem Rücken von Tieren waren gleichfalls bereits in SM I beliebte Füllmotive *(Abb. 6b.c)*.

Unsere Hilflosigkeit hinsichtlich der Datierung spätminoischer Weichsteinsiegel macht die Gegenüberstellung des Exemplars von der Royal Road *(Abb. 6b)* mit einem durch den Kon-

32 ILN 12.2.1962, 260f. Abb. 9.
33 z.B. CMS II,4 Nr. 76; IV Nr. 319; XIII Nr. 20D; Sakellariou, CollGiam Nr. 267.
34 CMS II,3 Nr. 3. 304; II,4 Nr. 55; Sakellariou, CollGiam Nr. 360. 361.

Abb. 7a–e a) Kenna, CS Nr. 369; b) CMS II,4 Nr. 188; c) CMS X Nr. 151; d) CMS X Nr. 152; e) CMS V,1 Nr. 242.

text in SM IA datierten Siegel aus dem 'Unexplored Mansion' von Knossos *(Abb. 6a)* [35] deutlich. Beide haben miteinander nichts gemein außer der Tatsache, daß es in Serpentin geschnittene SM I-Lentoide mit Wiedergaben von Löwen sind. Auf jeden Fall lassen sich die Unterschiede kaum durch einen geringfügigen zeitlichen Abstand beider Siegel voneinander erklären.

Wie problematisch die chronologische Eingrenzung von Weichsteinsiegeln zuweilen sein kann, soll anhand von einigen weiteren Löwenwiedergaben gezeigt werden. *Abb. 7a–e* zeigt fünf Darstellungen gelagerter Löwen im linken Profil mit zurückgewandtem Kopf. Die Beispiele des Ashmolean Museum in Oxford *(Abb. 7a)* und des Archäologischen Museums Iraklion *(Abb. 7b)* hat Younger seiner 'Cretan Popular Group' zugewiesen [36], während er *Abb. 7c* und *d* seiner 'Armeni Group' zuordnete [37], die durch das relativ gut erhaltene Beispiel *Abb. 7e* vertreten ist. Es muß betont werden, daß keines der beiden ersten Beispiele aus einem gesicherten frühen Kontext stammt. Die 'Armeni Group' stellt m.E. keine spezielle

35 Betts a.O. (oben Anm. 16) 94 NP 18 Taf. 186c.
36 Younger, Aegean Seals II, 124.
37 Younger, Aegean Seals V, 140.

Abb. 8a–d a) Sakellariou, CollGiam Nr. 266 = Inv. Nr. 3526; b) CMS II,4 Nr. 74; c) CMS II,4 Nr. 75; d) CMS IV Nr. 294.

Stilgruppe dar. Die Weichsteinsiegel aus der Nekropole von Armeni stammen lediglich aus der Spätphase der kretischen Glyptik, gehören aber unterschiedlichen Stilrichtungen an. Die Tiere beider Reihen sind charakterisiert durch einen relativ kurzen Rumpf zwischen dem Vorder- und dem relativ hochgedrückten Hinterteil. Die Körper erscheinen zu groß für die Siegelfelder und wirken daher gewaltsam in das vorgegebene Rund hineingezwängt. Dies wird besonders deutlich an den der Siegelkontur folgenden Unterschenkeln der Vorder- und Hinterläufe. Die Mähne ist in allen Fällen durch Punkte oder kurze, dicke Striche angegeben. Der Kopf, bestehend aus ein bis zwei Punkten zur Angabe des Mauls, und einem dickeren Augenpunkt, wird gegenüber der Mähne durch zwei oder drei bogenförmige Linien abgesetzt, wie wir dies ähnlich bereits bei eindeutig frühen Darstellungen gesehen haben. Die Beine sind nicht organisch aus dem Körper heraus entwickelt, sondern liegen an den Ansatzstellen mehr oder weniger als Riegel auf dem Rumpf auf. Zweifelsfrei lassen sich auf den fünf Beispielen zahlreiche gemeinsame Stilmerkmale feststellen. Mithin ist die Younger'sche Differenzierung in diesem Fall fragwürdig. Aufgrund des gesicherten Kontextes von *Abb. 7e* und der beschriebenen stilistischen Übereinstimmungen halte ich die Zuweisung aller fünf Exemplare an die Armeni-Stufe für richtig.

Aus SM I ist das Bildthema des stehenden Löwen, oder besser der Löwin, mit zurückgewandtem Kopf vorwiegend in der Hartsteinglyptik bezeugt. Betts hat diese Beispiele zum Teil behandelt [38]. Derselbe Typus begegnet auf den Abdrücken AT 36 und 38 aus Aj. Triada [39], die sich stilistisch und hinsichtlich der Qualität von den zuvor genannten beträchtlich unterscheiden. Eine enge Anlehnung an Vorbilder der Hartsteinglyptik oder sogar die Ausführung durch einen Hartsteingraveur ist anzunehmen bei dem Schieferlentoid der Sammlung Giamalakis *(Abb. 8a)*, auf dem ein relativ wohl proportionierter Löwe mit ausgesparter Schulter, einem durch einen großen Punkt markierten Unterkiefer und abgesetztem Nasenrückenriegel sowie ein isoliertes Tierbein wiedergegeben sind [40]. Die Darstellung ist vermutlich der Prototyp einer Reihe mit demselben Bildthema *(Abb. 8b–d)*. Gemeinsam sind den drei Motiven das etwas steife Stehen der Löwen, die relativ langen schlanken Beine der Tiere, das zur Spitze (nach vorn) hin sich verdickende Knollenmaul und das relativ große Auge. Äußere Anhaltspunkte für ihre Datierung liegen nicht vor. Wahrscheinlich wurden sie jedoch in SM IIIA graviert. In den folgenden Darstellungen *Abb. 9a–c* sind Einzelheiten stärker durch Bohrmarken betont, so. z.B. der Unterkiefer und die Schulter [41]. Kaum vorhanden sind diese Merkmale auf dem Lentoid HM 2511 *(Abb. 9d)* [42], das den anderen ikonographisch angeschlossen werden kann [43]. Merkmale vieler dieser Löwendarstellungen sind die vorgewölbte Brust und der weit ausschwingende Nacken, Phänomene, die auch von W. Müller bei den gleichzeitigen Ziegen und Rinderdarstellungen hervorgehoben werden [44], und der zum Nakken hin abfallenden Rückenkontur. Ein etwas abweichendes, doch zugleich verwandtes Bildthema ist der stehende Löwe, dem aus dem Maul der Hals und Kopf einer Ziege heraushängen *(Abb. 10a.c.d)* [45], also die Abbreviation des Tierüberfalls. Bei dem

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38 Betts a. O. (oben Anm. 1) 10ff. Abb. 15–20.

39 D. Levi, ASAtene 8/9, 1925/26, 96 Nr. 36 Abb. 59 Taf. VIII und Nr. 38 Taf. XIII. Nr. 36 stammt sicherlich von einem Hartsteinsiegel. Ein weiterer Abdruck, AT 83 (Levi a.O. 110 Nr. 83 Taf. XIII) wirkt daneben ausserordentlich unbeholfen. Typologisch dazu zu rechnen sind die Darstellungen auf dem Jaspislentoid CMS XI Nr. 317 sowie auf den Weichsteinsiegeln CMS V Suppl. 1A Nr. 120 und Boardman a.O. (oben Anm. 16) 120 Nr. 9 Taf. XIII Abb. 2,4.

40 Younger, Aegean Seals III, 56 hat das Stück dem Umkreis seines 'Mycenae-Vapheio Lion Master' zugewiesen. Doch der stehende Typus des Löwen und die Markierung des Unterkiefers durch eine Bohrmarke sprechen eher für einen Zeitansatz in SM II(–IIIA). Etwas früher entstanden ist vermutlich CMS VII Nr. 125 (anders Younger a.O. 60). Zur Pose, nicht zum Stil, vgl. ferner den Löwen H. Catling, BSA 74, 1979, 66 Seal 2 Abb. 45. Auch dieses letztgenannte Beispiel ist in Abhängigkeit von Darstellungen der Hartsteinglyptik entstanden. Eine relativ enge stilistische Beziehung besteht auch zwischen dem Löwen des Jaspislentoids CMS XI Nr. 317 und denen der Serpentinlentoide CMS V Suppl. 1A Nr. 120 und Boardman a.O. (oben Anm. 16) 120 Nr. 9 (OAM 1971.1144) Taf. XIII Abb. 2,4. Letzteres wird von Boardman m.E. in SM IIIB datiert und damit zu spät datiert.

41 Vgl. ferner CMS V Suppl. 1A Nr. 107 aus einem SM IIIB-Kontext. Die erörterten Merkmale der Löwen kehren wieder auf dem werkstattfrischen Siegel CMS V Suppl. 1B Nr. 285 aus Armeni mit der Wiedergabe eines Tierüberfalls.

42 J.G. Younger – J.H. Betts, BSA 74, 1979, 269f. Nr. 1 Taf. 38a.b Abb. 1.

43 Zu diesem vgl. stilistisch den Löwen CMS IX Nr. 150 und die Ziege CMS V Suppl. 1B Nr. 335. Zumindest scheinen diese beiden Darstellungen dieselbe Zeitstufe zu vertreten.

44 s. oben S. 162. 165.

45 Es handelt sich bei dieser Komposition um eine abgekürzte Wiedergabe des von J.H. Betts a.O. (Anm. 1) 9f. Abb. 11–14 behandelten SBZ I-Motifs.

Abb. 9a–d a) CMS X Nr. 164; b) CMS XI Nr. 243; c) CMS II,4 Nr. 218; d) HM 2511.

qualitätvolleren Beispiel *Abb. 10a* mit relativ hohem Relief wurden wiederum teilweise Techniken der Hartsteinglyptik angewandt wie wir sie bereits gesehen haben: Die Maulform, die Markierung des Kiefers durch einen Punkt und die ausgesparte Schulter sind wahrscheinlich mit dem schnell rotierenden Zeiger graviert. Auf *Abb. 10a–c* erscheint eine 'Säule'(?) über dem Rücken des Löwen [46], auf CMS II,4 Nr. 75 dagegen ein Pflanzenmotiv. Die Ziegenköpfe mit den eigentümlich geöffneten Mäulern *(Abb. 10a.c.d)* erinnern an Wiedergaben aus der Armeni-Nekropole [47]. Trotz des teilweise abgeriebenen Zustands der Siegel sind die Wiedergaben so ähnlich, daß darin Arbeiten derselben Hand gesehen werden können [48]. Das Zweigmotiv vor dem Tier, das so häufig bei den Ziegendarstellungen begegnete, kehrt hier wieder [49]. Auf *Abb. 10a–d* fallen auch die gewölbte Brust und die entsprechende Nackenpartie auf. Diesen späten Löwendarstellungen gemeinsam sind darüber

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46 Vgl. auch Abb. 9b; ferner CMS II,4 Nr. 18. 74 und HM 3007 = J.A. Sakellarakis, Prakt 1984, 593 Taf. 251d.

47 Vgl. z.B. CMS V Nr. 248–250. 272; ferner I Nr. 487.

48 Mit dem Knollenmaul und der Betonung des Kiefers durch einen gebohrten Punkt steht auch CMS I Suppl. Nr. 95, ein weiterer später Vertreter des 'Chimära-Typus', den Beispielen nicht fern.

49 s. W. Müller oben S. 160. 163ff.; ein Pflanzenmotiv erscheint in dieser Position auch auf CMS IX Nr. 149.

Abb. 10a–d a) Sakellariou, CollGiam Nr. 338 = Inv.Nr. 3211; b) CMS VIII Nr. 124; c) CMS II,4 Nr. 45; d) Kenna, CS Nr. 372.

hinaus auch die relativ starke Einziehung des schlanken Rumpfes in der Taille [50].

Als letztes Bildthema wird eine Art des Löwenüberfalls erörtert, in der ein relativ großer Löwe auf dem Rücken des Opfers mit weit zurückgewandtem Kopf schreitet und ihm in den Hals zu beißen scheint *(Abb. 11a–d)*. Dieses Kompositionsschema ist unter anderem bezeugt auf Hartsteinsiegeln aus der Frühphase von SM IIIA [51]. Aus einer SM IIIB-Wannenlarnax der Nekropole von Elounda stammt das Siegel *Abb. 11a*, das aber sicher etwas früher, also viel-

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50 Dieses Merkmal weisen auch die Darstellungen CMS V Nr. 264 und V Suppl. 1B Nr. 219 auf. Vermutlich gehört auch die Löwenwiedergabe CMS XII Nr. 273 in dieses Umfeld, die Younger, Aegean Seals II, 124 unter Lions b) Miscellaneous seiner 'Cretan Popular Group' zugeordnet hat. Stilistisch steht sie CMS II,4 Nr. 74 nahe. Für eine Spätdatierung sprechen auch das Zweigmotiv vor dem Tier, die 'Säule' über seinem Rücken und die stark vorgewölbte Brust. Die gepunktete Mähne deutet weder auf eine frühe noch auf eine späte Entstehung hin. CMS XII Nr. 273 hat ein nahezu identisches Pendant in dem unveröffentlichten Siegel HM 3193. Die zwei Streifen auf dem Rumpf von CMS XII Nr. 273 kehren wieder auf V Nr. 264, ähnlich auch auf V Suppl. 1B Nr. 219 aus Armeni und dem Serpentin(?)-Lentoid VIII Nr. 78.

51 z.B. CMS IV Nr. 259. Vgl. auch Younger, Iconography 100ff. PT 39B. Etwa in SM II–IIIA setze ich das Lentoid CMS II,3 Nr. 100 aus der Nekropole von Kalyvia, das möglicherweise als Prototyp für dieses Kompositionsschema anzusehen ist; s. dagegen aber Younger, Aegean Seals III, 60 unter 4. Masters of the Lions with Claws, der dieses Siegel in die erste Hälfte des 15. Jhs. datiert (ebenda 57).

Abb. 11a–d a) HM 2243; b) CMS II,4 Nr. 219; c) CMS II,3 Nr. 333; d) CMS X Nr. 158.

leicht in SM IIIA, geschnitten wurde. Drei weitere Siegel *(Abb. 11b–d)* stelle ich allein wegen desselben Überfallschemas und der annähernd gleichen Größenrelation beider Tiere in die zeitliche Nähe dazu [52]. Allen gemeinsam sind die schlanken Körper der Tiere sowie die starke Einziehung des Löwenrumpfes in der Taille. Doch in der Detailbehandlung lassen sich keine gemeinsamen Stilmerkmale feststellen. Zeitlich auf derselben Stufe stehen m.E. die beiden Löwen mit seitlich umgewandtem Vorderteil CMS II,4 Nr. 48 und Nr. 198. In der ersteren Darstellung ist unter dem Löwen vielleicht eine kleine Ziege oder ein Hirschkalb wiedergegeben, auf der letzteren in ähnlicher Position ein kaum identifizierbarer kleiner Vierfüßler. Auf beiden Siegeln füllt der Löwe fast das gesamte Feld aus. Details wie etwa die Mähne sind unterschiedlich wiedergegeben. Sichere Anhaltspunkte für die Datierung dieser beiden Siegel können jedoch nicht geboten werden.

Diese kleine Untersuchung stellt den Versuch dar, eine gewisse chronologische Ordnung in die spätminoischen Löwendarstellungen der Weichsteiglyptik zu bringen. Mit einiger Zuversicht lassen sich gewisse Bildthemen dem Beginn der spätminoischen Glyptik, andere der Spätstufe in SM III zuweisen. Allgemeingültige Stilmerkmale der späten Weichsteinglyptik lassen sich bislang kaum aufzeigen, wenn man einmal absieht von dem häufig bezeugten stei-

52 Ferner ist CMS II,4 Nr. 80 dazu zu rechnen.

fen Stehen der meist einzeln wiedergegegeben langbeinigen schlanken Tiere, ihrer zuweilen nach vorn gewölbten Brust und ihrem nach hinten ausschwingenden Nacken und der gelegentlichen Hinzufügung von einem 'Tannenzweig'-Motiv vor dem Tier. Zwischenstufen und Feindatierungen sind kaum möglich, da zu wenige sicher datierte Beispiele zur Verfügung stehen und da auch innerhalb der Weichsteinglyptik gelegentlich mit Erbstücken zu rechnen ist [53].

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53 Während manche Weichsteinsiegel werkstattfrisch sind, weisen andere starken Abrieb auf, der auf längere Benutzung hinweist.

LES SCEAUX PRISMATIQUES MINOENS: CHRONOLOGIE ET EVOLUTION

JEAN-CLAUDE POURSAT

Dans un article de 1958, Agnès Xénaki-Sakellariou avait tracé une esquisse de l'histoire des cachets prismatiques minoens. Cette esquisse apportait des précisions d'ordre typologique et avait en même temps un double intérêt: elle prenait parti sur les questions d'origine en affirmant, contre l'avis de Matz (qui pensait que le prisme avait pu se substituer, en Crète, au cylindre oriental) ou de Chapouthier (qui faisait dériver le prisme minoen du cachet anatolien en forme de fronton), que cette forme avait pris naissance en Crète même; d'autre part, elle situait clairement l'évolution du prisme dans le cadre général de la glyptique minoenne: «l'essor du cachet prismatique serait donc en rapport direct avec l'épanouissement des thèmes figuratifs, des pictogrammes et des hiéroglyphes» [1], son déclin correspondant à la disparition des cachets à faces multiples et à la prédominance des sceaux à une seule face gravée.

Cet article avait été rédigé au moment même où venait d'avoir lieu, en 1956, à Malia, la découverte de l'Atelier de Sceaux, qui a livré à lui seul une centaine de prismes [2]. Depuis cette date, le nombre des prismes connus s'est encore accru, mais, surtout, quelques précisions chronologiques ont été apportées; c'est à ce propos que nous voudrions présenter ici quelques remarques.

La thèse de l'origine crétoise des formes prismatiques, soutenue par Evans selon lequel les premiers prismes seraient dérivés de formes simples issues d'éclats de stéatite [3], pourrait s'appuyer aujourd'hui sur des arguments nouveaux. La découverte au Palais de Zakros d'un nombre important de fragments de stéatite en forme de prismes triangulaires, de fonction incertaine, pourrait indiquer que cette forme est presque naturelle [4]. Des études ethno-archéologiques récentes sur la fabrication des perles en Inde montrent aussi que la forme des sceaux à trois faces est une des plus aisées à réaliser [5]. Mais le problème de l'origine des prismes paraît cependant moins simple si l'on examine leur évolution chronologique.

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* Sur le cachet prismatique minoen, dans: E. Grumach (éd.), Minoica. Festschrift zum 80. Geburtstag von Johannes Sundwall (1958) 451sq. (cité ci-dessous Minoica).

1 Sakellariou in: Minoica 459.

2 Sur l'Atelier de Sceaux, voir BCH 102, 1978, 831sq.; CMS Beih. 0, 111sq.

3 Evans, SM I, 116. 120.

4 Prakt 1969, 202sq.

5 V. Roux – J. Pelegrin, Techniques et Culture 14, 1989, 37sq.; on notera en particulier que «les pièces de section triangulaire sont plus faciles à tailler que les pièces dont les ébauches sont de section quadrangulaire».

Qualifiés parfois d'archaïques, les prismes à trois faces ont souvent été datés, dans les premières études, de l'époque prépalatiale. A. Xénaki-Sakellariou conservait encore cette date, dans son article, pour l'apparition du prisme, même si elle affirmait que «ce n'est qu'après la fondation des premiers palais qu'il est devenu une forme courante» [6]. La datation tardive (fin du MM II) que j'ai proposée pour la production de l'Atelier de Sceaux de Malia [7] a modifié quelque peu les perspectives antérieures; adoptant cette datation, P. Yule place, dans son étude de 1980, l'ensemble du Groupe de l'Atelier de Malia (Malia Workshop Complex) à la période des premiers palais et n'admet une possibilité de datation à la période prépalatiale que pour de rares exemplaires présentant des caractéristiques distinctes des prismes réguliers ordinaires [8].

Même si l'on regroupe les prismes réguliers et les prismes en fronton ('gable', 'Giebelförmiges Plättchen') à trois faces décorées, c'est un nombre infime d'exemplaires — sur un total d'environ 600 prismes connus — qui peuvent être datés par leur contexte de la période prépalatiale (EM III/MM IA). Seuls, en fait, deux prismes à trois faces décorées du Bâtiment 6 d'Archanès paraissent provenir de contextes assurés du MM IA:

CMS II,1 nº 389: prisme irrégulier (une face plus large) en stéatite à faces légèrement elliptiques détachées, avec des représentations ornementales (quadrupèdes et spires, ornements de remplissage).

CMS II,1 nº 393: prisme en ivoire, à faces rondes détachées, portant des signes de la 'formule d'Archanès'.

Un petit nombre d'autres cachets à trois faces décorées, de contexte mal déterminé (MM I—II), pourraient appartenir au MM IA, si l'on se fie à des arguments stylistiques [9]:

CMS II,1 nº 85: prisme en stéatite, à faces rondes détachées (décor de rosettes et quadrupèdes), de Haghia Triada (tholos A).

CMS II,1 nº 126: prisme en fronton en ivoire (une face ronde et deux faces elliptiques — animal, spires, motifs décoratifs) de Kalathiana.

CMS II,1 nº 276: prisme en stéatite à faces rondes (presque carrées — rosettes et feuilles), de Platanos (tholos B).

CMS II,1 nº 287: prisme en fronton en ivoire (une face ronde et deux faces elliptiques — animal, bateau, motifs décoratifs), de Platanos (tholos B).

CMS II,1 nº 292: prisme en fronton en ivoire (une face ronde et deux faces elliptiques — croix, rosette, secteurs striés) de Platanos (tholos B).

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6 Sakellariou in: Minoica 458.

7 J.-C. Poursat in: CMS Beih. 0, 111sq.

8 Yule, ECS, 66sq. (catégorie 22c: «Miscellaneous shapes and materials»). Le 'Malia Workshop Complex' regroupe, dans la classification de Yule, la quasi-totalité des prismes.

9 Nous laisserons de côté ici des prismes, vraisemblablement de même date, mais sans contexte archéologique précis, comme CMS II,2 nº 260 ou CMS IV nº 121.

Ces cinq sceaux sont tous rattachés à un vaste groupe stylistique, auquel appartiennent aussi les deux prismes d'Archanès, qui a été dénommé par Yule le 'Border/Leaf Complex' [10]; ce groupe, auquel il attribue 160 sceaux (pour près de la moitié en ivoire) comprend notamment des disques ou discoïdes ainsi que des cachets en forme de fronton. Composé de sceaux d'excellente qualité, ce groupe est caractérisé d'autre part par ses motifs décoratifs (feuilles) et par des faces bordées par une ligne incisée ('faces détachées'); il paraît bien, dans sa très grande majorité, pouvoir être placé au MM IA, en raison à la fois de certains contextes et de références croisées avec l'autre groupe stylistique principal de la même période, celui des Lions Paradant ('Parading Lions/Spiral complex') [11].

En revanche, la date de deux prismes irréguliers (CMS II,1 n°s 309 et 453) en stéatite, à faces presque trapézoïdales, qui ont été rapprochés par Yule d'un bloc monumental de l'angle N–O du Palais de Cnossos daté par Evans du MM IA [12], reste beaucoup plus problématique. De même l'imprécision des contextes n'autorise pas à faire remonter avec certitude à cette date d'autres sceaux de la catégorie 22c de Yule, comme les deux prismes suivant provenant de Platanos [13]:

CMS II,1 n° 284: prisme en stéatite à faces détachées (quadrupèdes, feuillage) de Platanos (tholos Bêta).

CMS II,1 n° 344: prisme en stéatite à faces rondes détachées (une seule décorée d'une croix pommetée) de Platanos (tholos Gamma).

L'on observera dès lors que la rareté de ces prismes prépalatiaux ne plaide guère en faveur d'une création directe à partir de formes simples issues d'éclats naturels de stéatite, d'autant plus que la majorité de ces exemplaires sont en ivoire. C'est donc bien, nous semble-t-il, dans le cadre du 'Border/Leaf Complex' qu'il convient d'étudier l'apparition du prisme à trois faces décorées au MM IA.

Il faut revenir sur la coexistence, dans le petit groupe de cachets à trois faces décorées que nous avons cité, de formes dites en fronton (une face ronde, et deux faces elliptiques ou semi-elliptiques) et de prismes véritables à faces régulières rondes. Même s'il s'agit de deux formes bien distinctes typologiquement [14], les prismes en fronton présentent eux-mêmes des différences notables (faces de la partie supérieure elliptiques, ou demi-elliptiques) et il est parfois difficile de les distinguer des prismes véritables: ainsi le prisme en forme de fronton (une face plus large) d'Archanès CMS II,1 n° 389 ne peut-il guère être séparé du prisme

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10 Yule, ECS 209sq.

11 Il est possible que certains exemplaires du 'Border/Leaf Complex' se poursuivent au delà du MM IA, mais il est difficile de s'appuyer sur le seul exemple CMS II,2 n° 109, provenant de la zone de l'Atelier de Sceaux de Malia et qui tranche par le matériau, la forme et le décor sur le reste de la production, pour supposer que ce groupe se prolonge jusqu'au MM II (Yule, ECS 210). – Groupe des Lions Paradant: Yule, ECS 208sq.

12 Yule, ECS 68.

13 De même le prisme en stéatite à trois faces presque carrées non détachées CMS II,1 n° 427, de la grotte de Trapéza, daté du MM IA dans le CMS, est apparu, stylistiquement, comme l'un des objets les plus récents de la grotte: on peut se demander si la datation ne pourrait, là encore, être descendue jusqu'au MM II (P. Warren, Minoan Stone Vases [1969] 197).

14 Yule, ECS 56.

véritable CMS II,1 n° 393: mêmes faces rondes détachées, motifs décoratifs similaires. Les faces de ces prismes reprennent directement celles d'autres formes: discoïdes ou cylindres, dés, cachets en fronton. Ils représentent une possibilité de multiplication du nombre des faces, comme les prismes en fronton décorés sur trois faces. On notera d'autre part que la majorité de ces exemplaires présentent des faces détachées; il ne s'agit donc pas là d'un trait relativement tardif [15], mais bien d'une caractéristique liée à leur apparition dans le 'Border/Leaf Complex': les faces bordées d'une ligne incisée sont en effet un élément distinctif de cet ensemble; présentes sur la moitié des sceaux de ce groupe, elles sont notamment fréquentes sur les cachets en fronton, et régulières sur les disques et les frontons en ivoire. Autre caractéristique de ces prismes anciens: les faces rondes ou quasi rondes, dérivées elles aussi des autres formes que nous avons citées; les faces ovales, fréquentes par la suite, semblent tardives [16].

La principale question est de savoir à quel moment, et pour quelles raisons, cette forme des prismes se développe au point de devenir, au MM II, l'une des formes les mieux représentées. Toute une partie d'entre eux — prismes à trois faces en pierre dure, prismes à quatre faces — n'apparaissent, semble-t-il, qu'au MM II. Les prismes à trois faces en stéatite se sont-ils développés d'une manière régulière, à partir de leur création au MM IA, ou brusquement dans le courant du MM II? Les contextes clos du MM IB sont malheureusement très rares, et l'exemple de l'Atelier de Sceaux de Malia, daté du MM I au moment de la découverte, a montré que l'on ne pouvait se fier à des critères stylistiques superficiels.

Les arguments de Yule pour dater le Groupe de l'Atelier de Malia de la période protopalatiale dans son ensemble (MM IB—MM II) sont d'ordre statistique: «given the large number of seals, on purely statistical grounds it is difficult to imagine that all 550 date to a single ceramic period (i.e. MM II, in which many of these seals are relatively securely dated)» [17]. On observera cependant que dans le groupe 'Ladder and Spiral Group' (31 sceaux), datable du MM I, les prismes sont absents; le 'Platanos Goat Complex', daté lui aussi du MM I, ne comprend en fait que 5 sceaux, dont 3 petits prismes à faces rondes [18]. Le nombre de prismes à trois faces attribuables avec certitude au MM IB semble donc, de toute façon, relativement restreint, dans l'état actuel des connaissances.

L'on est ainsi conduit à l'hypothèse qu'une majorité des prismes à trois faces datent en fait du MM II. Si l'on cherche une explication au développement du prisme à cette période, on est tenté d'établir une corrélation, au moins partielle, entre l'usage de cette forme et celui des hiéroglyphes. Cette corrélation est bien établie pour les prismes à quatre faces, dont 35 exemplaires (sur une cinquantaine) portent des signes hiéroglyphiques. Mais le nombre le

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15 Minoica 456.

16 Le prisme à faces ovales CMS II,1 n° 145, de Koumasa (tholos A), considéré par A. Xénaki-Sakellariou comme faisant partie d'un contexte prépalatial (Minoica 456) ne peut plus être daté ausssi haut. — Il faut revenir, nous semble-t-il, à l'opinion d'Evans qui voyait dans les prismes allongés un indice de date tardive, même si les prismes à faces rondes existent jusqu'à la fin de la période protopalatiale.

17 Yule, ECS 213.

18 Yule, ECS 211sq.

plus important de sceaux hiéroglyphiques est constitué par les prismes à trois faces (70). Dans la mesure où l'usage de l'écriture hiéroglyphique n'est attesté actuellement, en dehors des sceaux eux-mêmes, qu'au MM II–MM III (documents inscrits ou empreintes de sceaux sur supports divers) [19], cela tendrait à soutenir l'hypothèse que le développement des prismes s'est fait essentiellement au MM II.

Nous ne traiterons pas ici de l'évolution ultérieure des prismes à trois faces, qui est bien connue: après la fin du MM II n'existent que les prismes-amygdaloïdes à faces bombées, dont le plus souvent une ou deux faces seulement seront gravées: la forme du prisme perd alors sa raison d'être, et se rapproche de la simple amygdaloïde dont on a pu penser qu'elle prenait effectivement la succession des prismes [20]. Les prismes à quatre faces semblent quant à eux disparaître après cette date: leur présence dans des contextes postérieurs au MM II semble due à de simples survivances [21].

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19 Voir CHIC.

20 On notera que l'amygdaloïde CMS II,3 nº 151, gravée sur les deux faces et portant sur une face des signes hiéroglyphiques, a vraisemblablement été produite par l'Atelier de Sceaux de Malia, ce qui confirmerait la possibilité de relations entre prismes et amygdaloïdes.

21 Seul pose véritablement problème le prisme Kenna, CS 147, que son style conduirait à placer, tout à fait isolé, au MR I: s'agit-il d'une oeuvre 'archaïsante' (A. Onassoglou in: CMS Beih. 1, 163)? Un autre prisme à quatre faces (CMS II,2 nº 314) a été classé parmi les sceaux talismaniques par A. Onassoglou (ibid., 168) qui suggère une datation au MM III, tout en relevant certains traits qui peuvent se rattacher au MM II.

THE 'GENIUS' IN LATE BRONZE AGE GLYPTIC: THE LATER EVOLUTION OF AN AEGEAN CULT FIGURE

PAUL REHAK

In 1964 and 1970, M.A.V. Gill catalogued approximately 60 representations of the Minoan 'genius'; [1] these have now increased to nearly 80 (Appendix). Recent studies demonstrate that the Middle Bronze Age genius was primarily connected with fertility, moisture, and probably cleansing. [2] Although these functions continue, many more emerge in the Late Bronze Age (LBA) and the evolution of the genius becomes more complicated. This paper examines the expanded role of the genius in LBA Crete and the mainland, and its incorporation into Mycenaean cult at major palatial centers.

Although it is impossible to reconstruct a history of the LBA on the basis of present knowledge, [3] and although the chronology of the period is now controversial, [4] the iconographic evolution of the genius can be sketched in broad outline. On Crete, the new roles of the genius in LM IA–B perhaps reflect the reorganization and increasing centralization and complexity of neopalatial society. [5] Significantly, the genius begins to

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* I would like to thank J.G Younger for advice and helpful criticisms. Important additional information about recently discovered genii was furnished by E. Hallager, M. Vlasakis, and J. Weingarten. Loyola University of Chicago assisted generously with my travel expenses for the conference.

Source of illustrations: *Fig. 1:* ARepLondon 13 (1967) 9 Fig. 13 (drawing by author); *Fig. 2:* Symeonoglou (infra n. 30) Pl. 73 Fig. 231 (drawing by author); *Fig. 5:* Levi (infra n. 7) Fig. 175 (drawing by author); *Fig. 9:* reconstruction by author. Remaining figures from the archives of CMS.

1 M.A.V. Gill, AM 79, 1964, 1ff.; ead., AJA 74, 1970, 404ff. Cf. comments by Nilsson, MMR² 376ff.; F. van Straten, BABesch 44, 1969, 110ff.; J.H. Crouwel, Talanta 2, 1970, 23ff.; C. Baurain in: L'Iconographie Minoenne 95ff.; Marinatos, MSR 45ff.; C. Sambin, BCH 113, 1989, 77ff.; J.L. Crowley, The Aegean and the East. An Investigation into the Transference of Artistic Motifs between the Aegean, Egypt, and the Near East in the Bronze Age, SIMA Pocketbook 51 (1989) 58ff. ch. 2; D. Sansone, Illinois Classical Studies 13, 1987, 1ff.; Marinatos, MR 196ff. For glyptic representations, see Younger, Iconography 158. 215ff. s.v. Genii (incomplete, and some others listed elsewhere).

2 J. Weingarten, The Transformation of Egyptian Taweret into the Minoan Genius: A Study of Cultural Transmission in the Middle Bronze Age, SIMA 88 (1991). A MM II/LM I roundel from Knossos shows a monster possibly related to the genius: E. Hallager – J. Weingarten, BSA 87, 1992, 177ff. See now J.G. Younger, Bronze Age Aegean Seals in their Middle Phase (ca. 1700–1550 B.C.), SIMA 102 (1993) 37.

3 The range of opinions is summarized by W.-D. Niemeier in: Krzyszkowska – Nixon (eds.), Minoan Society 217ff.

4 Various authors in: Archaeometry 30.1, 1988, 165ff.

5 See, e.g., recent comments by A. Peatfield, OpAth 18, 1990, 117ff.

perform more functions imitative of human activity: for example, hunting and carrying sacrificial animals. Blue monkeys [6] and griffins [7] do the same, and all three non-human creatures appear as servitors of divinities.

The genius is evidently restricted to Crete at the start of the LBA, when its iconography becomes more diverse. It has not yet been found on 'minoanized' islands like Thera, Melos and Keos in contexts contemporary with LM I, nor — like some other Minoan cult forms — is it represented in the Mycenae shaft graves. [8] Libation pitchers like those carried by genii, however, appear at a number of sites outside Crete at this time, though they are never common in the Mycenaean world, and humans are never shown holding them. [9]

The two Vapheio gems (LH IIA context) show that the Mycenaean awareness of the genius on the mainland begins before the widespread destruction of Minoan sites at the end of LM IB. [10] From LM II/LH IIB to near the end of LM/LH IIIA the genius is attested in both Cretan and mainland glyptic; Younger and Pini argue that at the end of this period the production of hard stone seals ceases. [11] The genius then disappears from Crete but achieves new life on the mainland in a variety of media, including fresco painting, mould-made ornaments, and ivory carving; all palatial crafts connected with, and probably supervised by, major centers of power. The continued existence of the genius on the mainland underscores a significant difference between the Mycenaean and Minoan use of sealstones. [12] Even on the mainland, the creature does not survive into the IIIC period, [13] despite indications that earlier works, mainly glyptic, were occasionally rediscovered [14] or remained in circulation for

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6 E.g., the 'saffron gatherer' fresco: Immerwahr, Aegean Painting 170 Kn No. 1.

7 E.g., the hunting griffin on Zakro sealing 183: D. Levi, ASAtene 8/9, 1925/26, 178 No. 183 Fig. 221 Pl. XVIII.

8 E.g., the 5 tripartite shrine on gold plaques from SG III and V at Mycenae: Buchholz – Karageorghis, PGC 109 No. 1303 Pl. 1303.

9 A Minoan silver example from Grave A of Circle B at Mycenae: ANM 8569: G. Mylonas, Ο Ταφικός Κύκλος Β των Μυκηνών, (1972) Pl. 16a.c; E. Davis, The Vapheio Cups and Aegean Gold and Silver Ware (1977) 134ff. No. 29 Figs. 106. 107. For a double-mouthed faience example from SG III, see K.P. Foster, Aegean Faience of the Bronze Age (1979) 122f. Figs. 30–31. S. Marinatos reported a stone plaque in this shape from Thera: Excavations at Thera, VII (1976) Pl. 54c. For a probable Minoan example from Kea, see W. Cummer – E. Schofield, Ayia Irini: House A, Keos III (1984) 107f. No. 1224 Pl. 77. One Minoan alabaster example was found in chamber tomb 102 at Mycenae: Sakellariou, ThTM 285 L 4290. On the dearth of Mycenaean examples, see R. Hägg in: Hägg – Nordquist, Celebrations 193. Jug-shaped beads are common at Mycenae: Sakellariou, ThTM Pls. 83. 114. 126. 130. 143.

10 CMS I Nos. 231. 232. On the tholos and its contents, E. Vermeule, Greece in the Bronze Age, rev. ed., (Univ. of Chicago Press, 1972) 127ff.; I. Kilian-Dirlmeier, JbZMusMainz 34, 1987, 197ff.

11 J.G. Younger in: CMS Beih. 1, 268ff.; id., Kadmos 26, 1987, 46f.; I. Pini, BICS 29, 1982, 130; however, cf. Pini's implication that the craft went on till the end of the Mycenaean age: K. Demakopoulou (ed.), The Mycenaean World. Five Centuries of Early Greek Culture, 1600–1100 B.C., (1988) 46f.

12 J.H. Betts – J.G. Younger, Kadmos 21, 1982, 115ff.; Younger (supra n. 11) 263ff.; cf. his comments in Kadmos 16, 1977, 141ff.; J. Weingarten, OJA 5, 1986, 27ff.; ead., OJA 7, 1988, 1ff.; ead., in: ASSA 105ff.

13 The genius identified on a LH IIIC bull rhyton from Tiryns is actually a rampant goat: see Appendix, Erratum.

14 The Tiryns ring (CMS I No. 179) was discovered in a Geometric context, and may have been found in the looting of a tomb.

considerable periods of time. [15]

1. LIBATION POURERS

The popular Middle Minoan (MM) function of the genius as libation bearer is never lost or eclipsed, but continues into the LBA with new variations. Most common is the single genius with libation pitcher, a composition ideally suited to the field of the sealstone; on the larger field of gold rings the genius may be reduplicated (e.g., CMS I No. 179) or paired antithetically (e.g., new sealing produced by a gold ring at Thebes: Appendix No. 74).

A particularly ambitious neopalatial composition with antithetic genii occurs on a stone triton found in a LM IB context at Mallia (Appendix No. 66); [16] iconographically, the scene is related to both contemporary fresco [17] and ivory work. [18] Although the scene has been adapted with some difficulty to the surface of the shell, the triton is important in showing that artists are sharing a common iconography and transferring it among different media during the neopalatial period. [19] On the Mallia triton, a pair of facing genii form a self-contained unit and perform a gesture that may be one of 'ablution and purification' rather than simply one of libation. [20] A distant glyptic descendant of the scene may occur in the genii with shared pitcher on CMS XI No. 295.

In other compositions, the focus of the genius's libation may be an offering table (CMS V No. 440; cf. the one on CMS I No. 179), [21] a stand or 'altar' supporting horns of consecration and vegetation (CMS I No. 231), or it may be omitted entirely (CMS I No. 232; XI No. 35). In other instances the object of the libation can be a pile of stones, [22] a tripod, [23] or a palm-tree.

The palm-tree as recipient of libation seems to be important for two reasons. First, the motif is particularly long-lived, originating in MM, [24] and enduring on the mainland until LH IIIB. Second, the palm-tree is connected with the iconography of the Knossos throneroom, since trees were painted on both sides of the throne (not lilies as restored by Evans). [25] Moreover, the incurved bases painted against the wall socle, and the undulating

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15 CMS I No. 172, was found in LH IIIB/C fill in the Cult Center at Mycenae, but is probably a much earlier Minoan product: Younger, Aegean Seals II, 122; E. Cline, BSA 86, 1991, 33 and n. 18.

16 C. Baurain – P. Darcque, BCH 107, 1983, 3ff.

17 Cf. the shape of the platforms or 'planters' from the LM IA villa at Amnissos: M.A.S. Cameron in: TAW I (1978) 581 Pl. 1.

18 Pyxis from Ayia Triadha: F. Halbherr – E. Stefani – L. Banti, ASAtene 55, 1977, 97 and Figs. 64. 65.

19 J.G. Younger in this volume 329ff., for other examples of similar motifs and treatments in different media.

20 Weingarten (supra n. 2) 12.

21 A stand appears within the door of a shrine on a gold ring in the Ashmolean Museum, AM 1938.1127: Kenna, CS 75 Fig. 155; 125 No. 250.

22 Gill (supra n. 1 [1964]) 17 No. 20.

23 Gill (supra n. 1 [1964]) 18 No. 22.

24 HMs 202: Gill (supra n. 1 [1964]) 15 No. 7.

25 M.A.S. Cameron in: Hägg – Marinatos, FMP 322 Fig. 3; 323 Fig. 7.

shape of the back of the throne, appear on the Zakros rhyton, where they suggest links with the cult of a goddess of nature whose realm includes mountains. [26] The palm is the focus of a sacrificial scene on a cushion seal from Naxos. [27]

On a newly discovered ivory mirror handle from a LM IIIA tomb at Pankalochori (Rethymnon) on Crete (Appendix No. 71), antithetic genii with libation jugs frame a mound shaped like the Knossos throne back and the mountaintop on the Zakros rhyton. Another genius appears with a pair of palm trees and a woman on a cylinder seal from Palaikastro. [28]

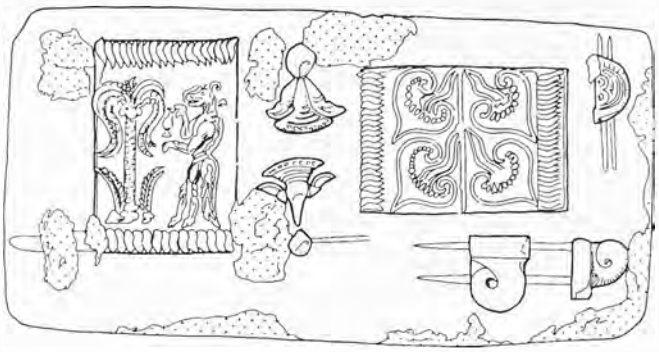

Fig. 1 Mycenae mould.

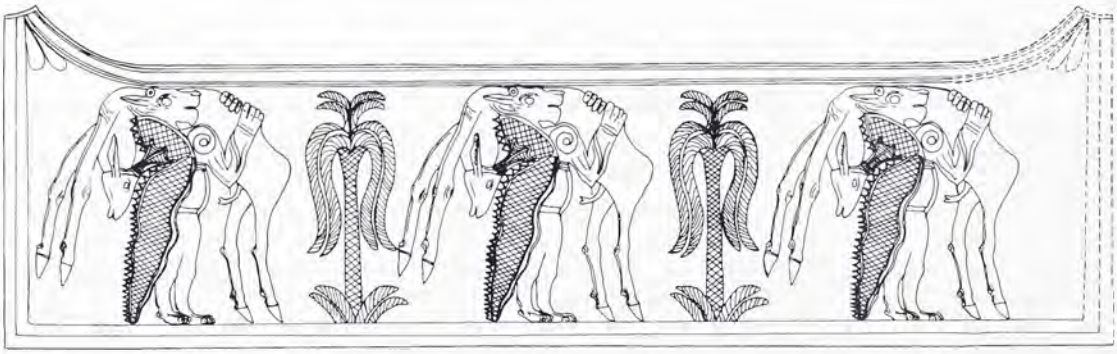

Fig. 2 Thebes ivory.

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26 On the Zakros rhyton, see N. Platon, Zakros. The Discovery of a Lost Palace of Ancient Crete (1971) 161. 164ff., col. Figs. on 165. 168; J. Shaw, AJA 82, 1978, 429ff. On the Knossos throne shape, see W.-D. Niemeier, AM 101, 1986 63ff.; id. in: Hägg – Marinatos, FMP 163ff., esp. 167.

27 CMS V No. 608; Younger, Iconography 129.V 608 and Fig. 99. Cf. N. Marinatos, OpAth 15, 1984, 115ff.; ead. in: CMS Beih. 3, 128. 129 Fig. 11; W.-D. Niemeier in: CMS Beiheft 3, 182 Fig. 6,9; 183.

28 HM 233: Gill (supra n. 1 [1964]) 16 No. 12.

On the mainland, a genius with libation pitcher faces a palm tree on a steatite mould for glass or gold ornaments from a LH IIIB context at Mycenae *(Fig. 1)*, though on the mainland (unlike Crete) there is no indication that the palm is connected with throneroom decoration. [29] But genii without pitchers are associated with fragments of palm trees of probable IIIB date on mural fragments from the Mycenae Cult Center (Appendix No. 68), and palms punctuate the alternating genii carrying animal victims on an ivory furniture plaque from Thebes (IIIB1 context) *(Fig. 2)*. [30] Another ivory genius, on a furniture inlay from the Pylos palace (IIIB2–C1 context), now lacks a pitcher but surely held one originally. [31]

Finally, a bronze hydria of earlier (15th c.?) date, found in Cyprus, has a handle decorated with registers of saluting antithetic genii flanking palm trees; around the rim is a frieze of 70 libation jugs. [32]

2. THE GENIUS AND SACRIFICE

Already at the beginning of the LBA, the genius on Crete also appears in a number of iconographic poses perhaps connected with sacrifice. A favored iconographic topos is the genius as carrier of animals, presumed to be sacrificial victims. This is another theme that originated in MM, as indicated by a MM seal found in a LM IIIA context at Kalyvia, [33] where the genius carries a fawn. This seal demonstrates the rediscovery or continued circulation of an earlier glyptic model *(Fig. 3)*.

Humans, as well as genii, carry animal victims. Before the end of LM IB, a sealing from Zakro shows a woman transporting an animal victim. [34] Similar women with victims appear contemporaneously on the mainland on three of the Vapheio seals (CMS I Nos. 220–222); and the genius with a small lion on another sealing from Ayia Triadha is nearly alike in pose. [35]

Most popular of the animal victims is the bull (e.g., CMS V No. 209; IX No. 129; XI No. 39), but antlered stags, similar to those in hunting scenes, [36] are also found (e.g., CMS XI No. 38). The ivory furniture plaque from a LH IIIB context at Thebes, mentioned

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29 A.H.S. Megaw, ARepLondon 13, 1967, 9 Fig. 13; Gill (supra n. 1 [1970]) 406 No. 59; P. Rehak in: Eikon 47. On the Pylos throneroom decoration, see Immerwahr, Aegean Painting 198f., Py Nos. 14. 16. 18.

30 Gill (supra n. 1 [1970]) 406 No. 54; S. Symeonoglou, Kadmeia I, SIMA 35 (1973) 48ff. Figs. 226–231.

31 J.-C. Poursat, Catalogue des ivoires mycéniens du Musée National d'Athènes (1977) 129 No. 393 Pl. XL; Gill (supra n. 1 [1964]) 15 No. 1.

32 Gill (supra n. 1 [1964]) 17 No. 17.

33 CMS II,3 No. 105; Younger, Aegean Seals V, 135: Spectacle-Eye; Minoan groups contemporary with LM IIIA1; Younger, Iconography 216: CMS II,3 No. 105a. Younger informs me that he has now redated it to MM and assigns it to his group of the 'Kalyvia Bull-Wrestler', and associates it with Phaistos sealings CMS II,5 Nos. 259. 260. 269 (see supra n. 2).

34 Levi (supra n. 7) 158 No. 4 and Fig. 166.

35 D. Levi, ASAtene 8/9, 1925/26, 109 No. 107 Fig. 123.

36 For a hunted stag, cf. CMS I No. 15.

above, shows genii carrying antlered stags and facing palm trees in a repeating pattern *(Fig. 2)*. [37]

Occasionally, the genius does not support its victims directly, but instead balances them at the ends of a carrying pole, as on a sealstone in Berlin where the victims are lions (CMS XI No. 37). [38] Since Younger has assigned the seal to his 'Almond Eye' group of 15th century date, [39] the carrying pole preserved on the seal may help to explain two much later and problematic fresco fragments of probable IIIB date discovered in the Cult Center at Mycenae. [40] On each, a horizontal band is preserved over the shoulders of genii, creating the impression that the object was a rope. But both the Berlin seal and frescoes of humans with carrying poles suggest that the painted genii from Mycenae should be restored in a similar fashion. [41]

Fig. 3 CMS II,3 No. 105a. Kalyvia seal.

Fig. 4 CMS V Suppl. 1B No. 153. Patras seal.

Perhaps the most surprising addition to the corpus of genii carrying animals is a seal found recently at Patras Voundeni (LH IIIA1 context), where the 'victim' is a man (CMS V Suppl. 1B No. 153)· *(Fig. 4)*. [42] His extended, curving pose recalls some depictions of bull-leapers [43] and 'Minotaurs', [44] but the head on the Patras seal is clearly human.

The genius so often carries animals interpreted as victims of hunting or destined for sacrifice that it is tempting to interpret the man on the Patras seal in the same fashion; that is, as a human sacrificial victim. But his pose, with the left arm crossed over the chest and the

37 Supra n. 30.
38 Cf. the pose of the 'Master of Animals' (without a carrying pole) on CMS XI No. 301.
39 Younger, Aegean Seals IV, 62 No. 8d.
40 Immerwahr, Aegean Painting 121, 192 My No. 8.
41 Women carry buckets on poles on the LM IIIA Ayia Triadha sarcophagus as well.
42 I thank I. Pini for essential information about this find, and J.G. Younger for additional discussion.
43 E.g., on CMS I No. 200. Cf. J.G. Younger, AJA 80, 1976, 125ff.
44 N. Schlager in: CMS Beih. 3, 225ff. Cf. the comments by L. Morgan in: CMS Beih. 3, 1989, 151ff.

right extended, seems odd. This cannot be a moribund figure, like the limp stags and bulls in other representations.

The evidence for human sacrifice in Bronze Age Greece, moreover, is controversial, and apparent references to the practice in the Linear B tablets are both later than the seal and equally difficult to interpret. [45] In a recent survey of the archaeological and literary evidence, D. Hughes argued against the existence of human sacrifice as a regular feature of cult. [46] One of the figures on the Patras seal may represent a change in plan on the part of the craftsman, as is perhaps the case on CMS XI No. 208, discussed below.

The late 15th/early 14th century also sees the development of the topos of genius leading bull, evidently to sacrifice, as on two seals in the Ashmolean Museum. [47] A fresco from Knossos (stylistically LM II–IIIA) shows a long-robed 'priest' in a chariot leading a bull on a tether behind his vehicle. [48] But genii do not appear as actual sacrificers, a role evidently reserved for humans. [49] Significantly, the LM IIIA period on Crete sees the painted representation of a bull sacrifice on the Ayia Triadha sarcophagus, while the remnants of such a funerary offering were found in the burial of a high-status woman in tholos A at Archanes. [50]

3. GENIUS IN HUNTING SCENES

An activity which may be a preliminary stage to sacrifice is hunting, and the relation of hunting to sacrificial ritual is well known from anthropological studies. [51] The genius appears as a hunter, again in imitation of human activity, on one of the sealings from a LM IB context at Zakros, where it strides through a rocky landscape and spears a bull *(Fig. 5)*. [52] It is worth emphasizing that the genius appears as hunter on Crete at the same time that hunting and chase scenes generally become more common on Crete and the mainland. Of such representations, the Mycenae Shaft Grave examples may be chronologically the earliest (LH I context), [53] but a MM III–LM I relief fragment with a boar from Palaikastro [54] may presage

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45 Most recently R. Buck, Minos 24, 1989, 131ff.

46 D. Hughes, Human Sacrifice in Ancient Greece (1991).

47 Gill (supra n. 1 [1964]) 19 Nos. 29. 30; Kenna, CS 132 Nos. 305. 306.

48 Immerwahr, Aegean Painting 175f. Kn No. 25.

49 Cf. MSR 47 and n. 242; Gill (supra n. 1 [1964]) 10 and n. 29; 20 No. 37. The composition lacks an offering table found in many scenes of sacrifice.

50 C. Long, The Ayia Triadha Sarcophagus, SIMA 69 (1974); J. and E. Sakellarakis, Archanes (1991) 77.

51 W. Burkert, Greek Religion (1985) 58. 151ff.; Marinatos, MSR passim.

52 D. Levi (supra n. 7) 162f. No. 104 Fig. 175 Pl. XV.

53 Glyptic examples include CMS I Nos. 9. 15. Cf. E. Vermeule, The Art of the Shaft Graves at Mycenae, (1974).

54 Heraklion Museum No. 993: P. Warren, Minoan Stone Vases (1969) 86. 177.

later Cretan hunts. [55] Various aspects of the bull chase become established artistic topoi at a number of Aegean sites before the end of LM IB/LH IIA. [56]

Fig. 5 Zakros sealing.

Fig. 6 CMS XI No. 208. Kakovatos seal.

An example of the genius in a hunt scene occurs on a (LH I–II?) agate cylinder seal found *ex situ* near one of the Kakovatos tholoi (CMS XI No. 208) *(Fig. 6)*. Here, a hunter attacks a lion with his sword; behind him a genius enframes the scabbard with its paws, an unparalleled gesture but one which vaguely recalls the position of the paws when holding a libation jug. The attacking, shorts-clad male is a motif already popular in mainland glyptic beginning in LH I; [57] the rampant lion also has good glyptic parallels. [58] The creature's 'elbow-spurs' recall those on the contemporary Mallia triton, but the way in which the genius stands behind the man, awkwardly framing the scabbard with its paws, is unique, and suggests a protective gesture. [59] A sketch of the gem published by Vermeule does not agree with the version in CMS XI, and the genius may be an afterthought. [60]

The awkward addition of the genius as 'epikourios' on the Kakovatos cylinder is highlighted by comparison with other representations of unusual animals. Blue monkeys from Xeste 3 brandish swords with scabbards or pluck lyres, [61] and – as noted above – a genius

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55 For a mainland boar hunt, cf. CMS I No. 227 (LH IIA context); XI No. 32. See comments by C.E. Morris in: Hägg – Nordquist, Celebrations 149ff. Cf. the boar hunt on the Lasithi dagger (LM IB–IIIA): C. Long, AJA 82, 1978, 35ff.

56 E.g., Katsamba pyxis: Heraklion Museum 345: S. Alexiou, Prakt 1963, 189ff. Pls. 167–168. A sealing from Zakro shows a man with lance: Levi (supra n. 7) 180f. No. 190; 190 Fig. 228 and Pl. XVIII. On the bull motifs on the Vapheio cups, see Davis (supra n. 9) 1ff.

57 Cf. the attacking man on CMS I Nos. 9. 11. 12.

58 CMS IX No. 7D; see Younger, Iconography 159 IX 7 D and Fig. 115.

59 Suggestion made by L. Morgan. Crouwel (supra n. 1) 25, compares its pose to that of the genius with jug, but the position of the paws is really rather different.

60 Vermeule (supra n. 10) 132 Fig. 25, shows traces of a possible helmet above the head of the genius. The gem should be reexamined.

61 Immerwahr, Aegean Painting 188 No. 13.

with spear attacks a bull on a contemporary sealing from Zakros. [62] But the role of the genius as assistant to humans is a limited experiment. [63]

4. ATTENDANT OF FEMALE AND MALE FIGURES OF POWER

A more formal aspect of the genius is its attendance as servitor to female and male figures of authority, though the status of these anthropomorphic figures — actual gods, humans imitating divinities, or rulers — is still the subject of lively debate. [64] The evidence suggests that the genius comes to be associated with female figures in LM IA–B; its connection with male figures occurs somewhat later, probably beginning in LM II/LH IIB.

a) with female figures

Although identifying cultural differences on the basis of iconography can be a risky business, [65] the appearance of the genius on two important works, a sealing found at Thebes and a gold ring found at Tiryns, allows us to compare the evolution of the genius as divine attendant from Minoan and Mycenaean perspectives.

An unpublished sealing discovered at Thebes [66] depicts a central woman sitting on a throne with curved struts and a tall back; her feet rest on a footstool with spindly legs. The throne and footstool are placed atop a platform with two levels. The lower level rests on three incurved Minoan bases, three-dimensional examples of which have been found on Crete but not on the mainland. [67] The upper level of the platform distinctly resembles the table used in animal sacrifices. [68] Heraldically flanking her on either side are a genius with pitcher and a griffin. She raises one hand toward the nearer genius, but probably does not hold anything. There may be celestial elements floating over her head.

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62 Marinatos, MSR 44 Fig. 30.

63 I disagree with N. Marinatos, who identifies this role as 'a major sphere of action', Marinatos, MSR 46.

64 E. Davis, AJA 90 (1986) 216. The issue was treated in a panel discussion at the annual meeting of the AIA in New Orleans, 1992: "The Role of the Ruler in the Minoan and Mycenaean World," organized by P. Rehak and N. Marinatos; see abstracts in AJA 97, 1993, 321f.

65 Cf. the continuing controversy over 'Minoan' and 'Mycenaean' elements in the Cycladic paintings from Akrotiri.

66 Careful descriptions have been provided by N. Marinatos and W.-D. Niemeier; J.G. Younger kindly sent a sketch.

67 E.g., 4 from the palatial building at Archanes: J. and E. Sakellarakis (supra n. 50) 32 and Fig. 16. The base appears in mainland glyptic (CMS I Nos. 46. 73. 98), on a painted plaque from the 'Cult Center' and on the Lion Gate relief. Beads of paste or gold imitate the shape: Sakellariou, ThTM, Pls. 41. 42. 79. 99. 130. 131. 132.

68 E.g., CMS II,3 No. 338; XI No. 52; cf. the table on the Ayia Triadha sarcophagus: for ills., see Long (supra n. 50). On bull sacrifice, cf. Younger, Iconography 176f. 186, and 257 for sacrificial tables.

The presence of fantastic creatures like the genii and griffins should indicate that the woman is divine, a *Potnia theron*. [69] Significantly, the chair of the Thebes goddess has a back, recalling the Knossos throne; [70] the sealing may thus represent a strongly 'Minoan' iconographic strain. As noted above, the outline of the back of the Knossos throne resembles the peak on the famous 'Sanctuary rhyton' found at Zakros; [71] a similar undulating shape is flanked by antithetic genii with ewers on an ivory mirror handle from a LM IIIA context at Pankalochori (Appendix No. 71).

The curved struts of the thrones at Knossos and on the Thebes sealing suggest a prototype in wood. Another seat with curved struts, backed by rocks (another mountain peak?), appears on a gold ring found at Mycenae (CMS I No. 101). [72] Backless chairs of similar form are shown on an ivory mirror handle from Mycenae, where they are occupied by women holding up branches or grain in a hieratic gesture. [73]

The architectural base supported by incurved 'altars' on the Thebes sealing is a variant of a type which appears in murals and in glyptic during LM I on Crete [74] and then spreads to 'minoanized' islands like Thera. [75] And a seal found at Routsi excerpts griffins on such a platform from their broader context (CMS I No. 282).

But it is important to point out that the platform on the Thebes sealing differs from the one in a wall painting from Xeste 3, and that the Cycladic goddess sits on a different kind of throne, resembling a cushion rather than a wooden chair. [76] Thus, the iconographic combination on the Thebes sealing of griffins, throne, and the incurved bases most closely recalls that of the Knossos throneroom and its paintings, and suggests an important link between the centers. [77] At the same time, the genii have forehead curls, which Crouwel identified on other works as a possible trait added by mainland artists. [78]

The composition on the Tiryns ring (CMS I No. 179) is related to the one on the Thebes sealing, but the woman now sits off to one side, on a 'campstool' with tassels, set above an architectural dado which stretches the length of the scene, rather than atop a platform *(Fig. 7)*. She is approached by a line of four genii with pitchers, with vertical branches

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69 C. Renfrew et al., The Archaeology of Cult. The Sanctuary at Phylakopi, BSA Suppl. 18, 1985, 11ff., esp. 22ff.

70 Backless examples were found at Katsamba and Myristis: N. Platon, KretChron 5, 1951, 385ff.; J. and E. Sakellarakis (supra n. 50) 25.

71 Supra n. 26.

72 Younger, Iconography 138f.; see CMS I No. 128; Niemeier (supra n. 27) 173 Fig. 4,4; 174.

73 ANM 2399: Poursat (supra n. 31) 80 No. 270 Pl. XXIV; Sakellariou, ThTM Pl. 2. Comparable figures are discussed by Rehak (supra n. 29).

74 A number of examples are collected by N. Marinatos in: TAW III,1 (1990) 370ff., esp. 372ff.

75 Xeste 3: Marinatos, AaR 61f. Fig. 40; 66f. Fig. 44. Cf. comments by N. Marinatos (supra n. 74) and in: Hägg – Marinatos, MTh 167ff.

76 The platform of the Thera goddess can be described as tripartite. Her seat resembles a cushion, and otherwise appears only on an ivory from Mycenae: Poursat (supra n. 31) 91 No. 295 Pl. XXIX; Sakellariou, ThTM 105f. E 2641 Pl. 27.

77 Supra n. 25. 26. Cf. another Minoan gold ring found at Thebes: CMS V No. 199; Younger, Aegean Seals II, 135.

78 Crouwel (supra n. 1) 24f.

between. Thus, the motif of the genius with jug and vegetation, originally found on MM Crete, is here reduplicated and joined to the LM I motif of the enthroned woman to create a complex pictorial scene.

Campstools with tassels are occupied by men participating in a drinking ritual in the presence of a probable goddess ('La Parisienne') on a fresco from Knossos stylistically dated to LM II–IIIA, [79] but the campstoool is not a common seat for Minoan figures, who are usually seated on rocks or on architectural platforms. The crossed legs may even be indebted to New-Kingdom Egyptian thrones. [80] The footstool, by contrast, differs from the one on the Thebes sealing, but so closely resembles the Linear B ideogram for this object that one wonders if the ring's creator was aware of the sign. [81] Surviving ivory footstools, as well as the yellow-painted one on a LH IIIB mural from Mycenae, are rather different in form. [82]

Fig. 7 CMS I No. 179. Tiryns ring.

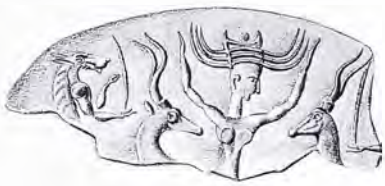

Fig. 8 CMS I No. 379. Pylos sealing.

The chalice held by the goddess, however, is of a specifically Minoan form which is extremely rare in Cretan contexts after the LM IB destructions. [83] The few mainland examples are found exclusively in the Argolid. Two were buried in the LH I Shaft Graves. [84] Two more may have been used for cult purposes at Mycenae until IIIB, [85] but Mycenaean

79 Evans, PM IV 379ff.; Immerwahr, Aegean Painting 176 Kn No. 26. Cf. a sealing from Knossos: Cretan Seals 57 Fig. 120.

80 E.g., the "ecclesiastical" throne of Tutankhamun: H. Carter, The Tomb of Tut-Ankh-Amen, (1963) 111f. Pl. XXXIII.

81 J. Chadwick, Documents in Mycenaean Greek, rev. ed., (1973) 332f.

82 Examples with figure-eight shields have been found in tholos A at Archanes (LM IIIA) and at Mycenae and Thebes (LH IIIB): J.-C. Poursat, Les ivoires mycéniens, (1977) Pl. IV,1.3.

83 Examples from probable LM IA/LH I contexts were found at Knossos, Thera, Makrygialos, Zakros, and in the Mycenae shaft graves. Undated is the stem of 4-lobed example in Nauplion: Evans, PM II 127 Fig. 62b. A putative example on the Campstool Fresco (supra n. 79) is fragmentary.

84 Exs. from SG IV and V: Karo 118 No. 600; 148 No. 854.

85 A. Wace, BSA 24, 1919/21, 200ff.; id., BSA 25, 1921/23, 1f. E. French has suggested to me that the material in the Rhyton Well was deposited when the Cult Center was reorganized (personal communication 1990). Cf. B. Kaiser, AM 95, 1980, 1ff. Fig. 2 Pls. 5,1–2; 6,1–2. From a LH IIIA context at Dendra came a silver example: ANM 7339: Davis (supra n. 9) 282f. No. 118 Fig. 229.

figures, including enthroned women, generally drink instead from stemmed kylikes, of which literally thousands were stored in the pantries surrounding the Pylos megaron. [86] Considerations of both iconography and style thus assure a LH II date for the Tiryns ring. [87]

In the case of the Tiryns ring, the derivation of the scene from a mural composition is particularly evident, both in the paratactic arrangement of figures akin to a procession fresco, [88] and in the undulating band which creates the border of the sky. [89] The lower triglyph-half rosette border along the bottom seldom appears in glyptic, [90] but actual stone revetments of this form were used at Knossos (in the vicinity of the Campstool fresco), [91] in the porch of the Tiryns megaron, [92] within the Mycenae palace, [93] and on the tholoi of 'Atreus' and 'Clytemnestra' at Mycenae. [94] The motif even appears in painting at Mycenae and Pylos. [95]

A final example of the glyptic genii with a goddess appears on sealings from a LH IIIB2–C1 context in the Pylos palace (CMS I No. 379) *(Fig. 8)*. Younger included this in his 'Rhodian Hunt Group' and suggested a late IIIA date for the manufacture of the ring which was used to make the sealings, [96] making this one of the latest examples of Aegean fine glyptic art before the practice dies out.

It is clear that the composition draws on a long existing iconographic tradition. In the center is a goddess with upraised arms who wears the problematic 'snake-frame' headdress surmounted by the labrys. She has been associated with the Minoan divinity connected with the Knossos palace and throneroom, which was still in its final phase of development and use at the time this ring was produced. [97] In her other glyptic manifestations, this goddess is generally flanked by antithetic griffins or lions. [98] On the Pylos sealing, however, the

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86 A terracotta figurine from Lakonia holds a kylix: Buchholz – Karageorghis, PGC 103 No. 1247 Pl. 1247; K. Demakopoulou, Τό Μυκηναϊκό Ιερό στο Αμυκλαίο καί η ΥΕ ΙΙΙΓ Περίοδος στή Λακώνια (1982) 55f. Pl. 26 No. 68a.b. Cf. the pictorial krater from Tiryns: K. Kilian, AM 95, 1980, 21ff.

87 E.g., Younger, Aegean Seals IV, 53: 'Tiryns Ring Group', Almond-Eye; Younger, Iconography 180f. A. Xénaki-Sakellariou favors a LM I date on the basis of ring form: CMS Beih. 3, 324 Fig. 1; 336. Cf. comments by J. Sakellarakis in: CMS Beih. 0, 115ff.

88 Immerwahr, Aegean Painting 174f. Kn No. 22; redated to LM IB by E. Davis, TAW III,1 (1990) 214f.

89 Cf. the wavy border above the figural scene in a painting from the 'House of the Ladies' at Akrotiri: Immerwahr, Aegean Painting col. Pls. XI. XII. Cf. Younger, Iconography 290: 'Heaven Lines.'

90 CMS I No. 293; Younger, Aegean Seals III, 54; Younger, Iconography 322 Dado 8. The griffin on the seal recalls the painted creatures in the Knossos throneroom and the large and small megara at Pylos.

91 Evans, PM II 591 Fig. 368: NW palace angle; cf. PM II 163 Fig. 83: fragments from SW entrance porch.

92 K. von Filseck, AA 1986, 1ff.

93 A. Wace, BSA 25, 1921/23, 235f.

94 Buchholz – Karageorghis, PGC 42 Nos. 167. 168 Pls. 167. 168.

95 E.g., at Pylos, Immerwahr, Aegean Painting 200 Py No. 25; Mycenae: Immerwahr, Aegean Painting 194 My No. 19.

96 J.G. Younger in: J.L. Davis – J.F. Cherry, eds., Papers in Cycladic Prehistory, UCLA Institute of Archaeology Monographs XIV, (1979) 97ff.

97 R. Hägg – Y. Lindau, OpAth 15, 1984, 67ff. The phases of the throneroom are summarized by Niemeier (supra n. 26) and R. Hägg, OpAth 17, 1988, 99ff.

98 Griffins alone appear in the Knossos throneroom; griffins and lions in the Pylos megaron.

flanking animals are pairs of genii offering branches [99] to rampant quadrupeds, probably agrimia or antelope. The woman, then, is a *Potnia theron* like the Minoan goddess, but is attended by genii like the goddess on the Tiryns ring and the Thebes sealing. A question worth asking is whether these are separate divinities or aspects of a single goddess. [100]

On the Pylos sealing, the compositional element of the genii with branches and rampant quadrupeds has a nearly contemporary parallel on an ivory pyxis fragment from a LH IIIA context in the Dendra tholos (Appendix No. 72) *(Fig. 9)*. [101] The ivory preserves only the forepaws of the genius, its branch, and the forehoof of the quadruped, but is clearly related to the glyptic scene. The animals on the pyxis flank an undulating outcrop which recalls the back of the Knossos throne and the shape on the Pankalochori mirror handle (Appendix No. 71) of roughly the same date. In addition, the ivory medium of the pyxis fragment and the iconography of the rampant goat and vegetation suggest Near-Eastern connections and hint at the international flavor of the period. [102]

Fig. 9 Dendra ivory.

Fig. 10 CMS V,1 No. 201. Benaki seal.

b) with male figures

Several sealstones show a new association for the genius with male figures of power or authority, but are not easy to interpret. An important example is a sealstone in the Benaki Museum said to have been found in western Crete (CMS V,1 No. 201) *(Fig. 10)*. The composition includes a man standing over horns of consecration, his arms bent and fists

99 Cf. the plants on the Tiryns ring, CMS I No. 179; the objects are not swords, as stated in Younger, Iconography 183 I.179.

100 A number of goddesses are named in the Linear B tablets, but they may represent aspects of Potnia: see e.g., Chadwick (supra n. 81) 275ff.

101 The ivory is the subject of a forthcoming study by P. Rehak, "An ivory pyxis fragment from Dendra."

102 Cf. the animals on the Minet el-Beida ivory pyxis lid. See comments by M.-H. Gates in: Eikon 77ff.

clasped in front of his pectorals. Flanking him are a genius with libation pitcher and a winged agrimi. Younger considers the sealstone to be a Minoan work contemporary with LM IIIA1; it thus belongs to a period of possible Mycenaean occupation of Crete. [103]

Here we can suggest that certain Aegean poses changed their meaning over time. The man's pose originated in the MM period when it was used for terracotta male votaries dedicated in the peak sanctuary at Petsofas near Palaikastro, [104] and it continues to be used for LM I bronze votaries dedicated in peak sanctuaries. [105] An exceptionally large and luxurious figure in the same pose is the chryselephantine 'kouros' found in a LM IB destruction level at Palaikastro. [106] Since Minoan gods often extend one arm in a different pose, [107] and because excavated Minoan ivories are usually found in groups and seem to serve as recreations of cult activities, [108] it is doubtful that the 'kouros' represents a god; its function as a votary merits further exploration. [109]

In the period after the extensive LM IB destructions, however, it may be that this pose, as it recurs on the Benaki sealstone, has changed to indicate divine status (cf. e.g., CMS I No. 68; II,3 No. 193). The horns beneath the man's feet underscore his unusual importance, recalling and perhaps abbreviating the iconography of the 'Master Impression' from Khania. [110] Wingless agrimia have a long association with the divine on Crete, and a pair serve as draft animals for a pair of women on the Ayia Triadha sarcophagus contemporary with the sealstone. [111]

The genius with pitcher on the Benaki seal continues a long-standing tradition, best exemplified by the attendants of the enthroned goddesses on the Thebes sealing and the Tiryns ring. But the exact combination of elements on the seal is not found elsewhere.

Other sealstones show a standing profile 'Master of Animals' between antithetic genii (CMS XI No. 36), sometimes with pitchers (CMS XI No. 290). [112] And a sealstone in London shows the genius itself as the object of attention, poised between flanking men (CMS VII No. 95), perhaps indicating that the later genius was becoming an object of veneration in its own right. [113]

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103 Younger, Aegean Seals V 133: Spectacle-Eye; Younger, Iconography 156 Fig. 114 (caption incorrect); 158 No. 201. Cf. Niemeier (supra n. 3).

104 J.L. Myres, BSA 9, 1903, 361ff. Pls. IX. X.

105 Example from Kato Syme Viannou: Prakt 1988, Pls. 174. 175. Cf. C. Verlinden, OpAth 17, 1988, 183ff.

106 ARepLondon 1988, 73. 74 Fig. 106.

107 Niemeier (supra n. 27) passim.

108 Examples include bull-leapers from Knossos (Evans, PM III 428ff.), and a pair of boys from Palaikastro (Evans, PM III 446 and Fig. 310). See also heads and limbs from Archanes: J. and E. Sakellarakis (supra n. 50) 44. 53.

109 N. Marinatos and R. Hägg have argued against the existence of free-standing cult images on Crete in: Krzyszkowska – Nixon, Minoan Society 185ff.

110 Khania Museum No. 1563: Hallager, MI, MW 210f. No. 191.

111 E.g., the animals on the Zakros rhyton (supra n. 26). Cf. C. Long (supra n. 50). For other agrimi-drawn chariots, see Younger, Iconography 164.

112 Younger dates both to the 15th century and assigns them to his 'Almond and Dot-Eye' groups: Younger, Aegean Seals IV 62 8d.

113 Younger, Aegean Seals IV, 62.

c) antithetic genii and column

At least four times, antithetic genii flank a central column, [114] in a variation on a composition in a variety of media which elsewhere includes lions, [115] sphinxes, [116] griffins, [117] and even birds [118] as flanking animals. The central column has a long iconographic tradition on both Crete and the mainland, where it has usually been interpreted as an abbreviated symbol of a palace, shrine, or a male or female ruler or god. [119]

FURTHER DEVELOPMENT OF THE GENIUS

Since the manufacture of hard stone seals ends before LH IIIB (according to Younger and Pini), and because a number of non-glyptic genii appear on the mainland in IIIA–B, it seems clear that even though sealstone production was declining, artisans in mainland palatial workshops continued to experiment with genius iconography as administrations expanded. New views of the genius occur in wall paintings (Pylos and Mycenae), ivories (Pylos and Thebes), and ornaments (mould from near the Cult Center at Mycenae; glass plaques from tombs).

Significantly, genius iconography has been found at most of the major centers of power in IIIB contexts (Mycenae, Pylos, Tiryns, [120] Thebes), suggesting that the creature played a significant role in palatial ideology. In addition, several of the Mycenae examples are concentrated in the Cult Center, an area linked with blue glass (kyanos) and ivory workshops under palatial control. [121] A number of blue glass plaques with genii were found in the tombs at Mycenae, suggesting that some of the output of the workshops was designed for the servicing of the funerary needs of dead rulers, a need which finds its fullest expression in the massive LH IIIB building program at Mycenae. [122]

The renewed vigor with which the genius is represented in other media after the manufacture of stone seals had ceased may owe something to glyptic models that remained in circulation, particularly in shrines and the workshops associated with them. The processions

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114 Gill (supra n. 1 [1964]) 17 Nos. 15. 16; ead. (supra n. 1 [1970]) No. 57; CMS XII No. 302.

115 E.g., the Lion Gate at Mycenae: for recent discussion of its symbolic significance, see Rehak (supra n. 29). Cf. CMS VII No. 154.

116 E.g., on an ivory plaque from Mycenae: Poursat (supra n. 31) 43f. No. 138 Pl. XII.

117 E.g., tethered griffins from the 'Great East Hall' at Knossos: Evans, PM III, Figs. 355–359; Immerwahr, Aegean Painting 171 Kn No. 8 e. For glyptic examples, see CMS I Nos. 98. 218.

118 CMS VII No. 187.

119 Reasonable discussion by Nilsson, MMR² (supra n. 1) 236ff.

120 Supra n. 14.

121 O. Krzyszkowska has recently raised the interesting suggestion that some ivory furniture was manufactured for diplomatic exchanges: BSA 86, 1991, 107ff.

122 E. French in: Images of Authority. Papers presented to Joyce Reynolds on the occasion of her 70th birthday, ed. by M. MacKenzie – C. Roueché, The Cambridge Philosophical Society, Suppl. 16 (1989) 122ff. Cf. comments by J. Wright in: Thanatos, Aegaeum 1 (1987) 171ff., and id., AJA 95, 1991, 316.

of repeating genii on the Thebes ivory plaque and the fresco fragments from the Mycenae 'Cult Center' may derive from the earlier glyptic examples like the Tiryns ring. Another sealstone (CMS I No. 172), of much earlier Minoan manufacture, was found in the Cult Center in unstratified fill of probable LH IIIB–C date. [123] The Mycenaean use of the genius thus differs significantly from the Minoan. On the mainland the creature becomes part of an established palatial iconography, common to all the major centers, but developing without direct contemporary production of glypic in hard stone.

APPENDIX

CATALOGUE OF GENII IN ADDITION TO M.A.V. GILL (SUPRA N. 1).

No. 60 Fragmentary hematite cylinder; genius with vessel, from Cyprus; Sansone (supra n. 1) 1 No. 60.

No. 61 Hematite cylinder seal; Sansone (supra n. 1) 1 No. 61.

No. 62 Steatite lentoid with antithetic genii; between them, 3 dots and two vertical elements (plants?); Medeon, grave 29; Delphi Museum; CMS V No. 367.

No. 63 Agate amygdaloid seal with genius holding ewer over pillar or stand; plant behind; Nichoria, tholos tomb, LH IIIA2–B1 context; CMS V No. 440; Younger, Iconography 216.

No. 64 Steatite cylinder seal, Palaikastro, Crete; Sansone (supra n. 1) 2 No. 64.

No. 65 Fragment of a glass plaque with genius, Mycenae akropolis; G. Mylonas, Prakt 1963, 101; Sansone (supra n. 1) 2 No. 65.

No. 66 Steatite triton with two genii on platform, one with pitcher, from Mallia (Ayios Nikolaos Museum); LM IB context; C. Baurain and P. Darcque, BCH 107, 1983, 3ff.

No. 67 Hematite lentoid; uncanonical genius above waist, kilt and human legs below; flanking dogs; CMS VII No. 126; Sansone (supra n. 1) 2 No. 67.

No. 68 Fresco genii with pole; fragments of palm trees, from area southwest of Cult Center; LH IIIB–C context; I. Kritsele-Providi, Τοιχογραφίες του Θρησκευτικού Κέντρου των Μυκηνών (Athens, 1982) A 1–5, 21ff., Figs. 2–3, Pl. 1; Immerwahr, Aegean Painting 121 and n. 20; 192 My No. 8.

No. 69 Carnelian amygdaloid seal with antithetic genii jointly holding one pitcher; Monte Carlo, collection of G. Sangiorgi, no Inv. No.; CMS XI No. 295.

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[123] Cline (supra n. 15). For glyptic representations, see Younger, Iconography 158. 215ff., s.v. Genii (incomplete, and some others listed elsewhere).

No. 70 Steatite lentoid seal with antithetic genii flanking central column; NY, Metropolitan Museum No. 26.31.338; CMS XII No. 302; Crowley (supra n. 1) Fig. 146.

No. 71 Ivory mirror handle from Pankalochori; antithetic genii with jugs over cairn; Rethymnon Museum; LM IIIA context (unpublished; information provided by W.-D. Niemeier and M. Vlasakis).

No. 72 Ivory pyxis fragment from Dendra; genius with branch facing rampant caprid; Athens National Museum No. 7359 (on display); LH IIIA context; A. Persson, The Royal Tombs at Dendra near Midea, (Lund, 1931) 41 No. 6; 59 and n. 1, Fig. 36; Poursat (infra n. 31) 115 No. 358 Pl. XXXVIII; Rehak forthcoming (supra n. 101).

No. 73 Lentoid seal with genius carrying man; found near Patras; LH IIIA context; Patras Museum 3983: CMS V Suppl. 1B No. 153.

No. 74 Unpublished sealing from Thebes (impression of gold ring); enthroned goddess on platform with footstool flanked on each side by a genius with pitcher and a griffin; (under study by V. Aravantinos).

No. 75 Steatite lentoid seal, unknown origin, antithetic genii, smaller genius to L; branch to R. CMS I Suppl. No.137; Younger, Iconography 216.

No. 76 Sealing from Khania; small genius with paw in air and a quadruped; LM IIIA1 context; CMS V Suppl. 1A No. 122.

No. 77 Clay bar with impression of genius from Khania: CMS V Suppl. 1A No. 128.

No. 78 Two possible sealings with genii on roundel from Mallia; E. Hallager – J. Weingarten, BCH 117, 1993, 1ff.

Possible:

No. 79 Sealing from Zakros palace shrine; ?genius; Platon (supra n. 26) 147; Younger, Iconography 219: Miscellaneous.

No. 80 Knossos sealing No. 1025; possible carapace of genius; J. Betts, BSA 62, 1967, 31 No. 5.

No. 81 Knossos sealing No. HMs 106; palm tree and ?genius; Betts, op.cit. 38 No. 36.

No. 82 Knossos sealing No. 1042; ?genius above waist; human legs below (cf. CMS VII No. 126); Betts, op.cit. 30 No. 4.

Erratum:

Bull rhyton from Tiryns with pictorial decoration shows a rampant goat, not the genius; LH IIIC context; correct identification noted only by Vermeule – Karageorghis, MPVP 224 No. XI.85.1, Pl. XI.85.1.

ZUM BEGRIFF STIL IN DER MINOISCHEN UND MYKENISCHEN GLYPTIK

WOLFGANG SCHIERING

Seit dem 1. Marburger Symposion nehme ich als interessierter Beobachter an diesen für die Erforschung der ägäischen Glyptik so wichtigen Zusammenkünften teil. Die beiden Referate, die ich 1971 und 1978 gehalten habe, waren deshalb auch nicht spezieller, sondern theoretischer, bzw. methodischer Art — und um theoretische und methodische Anliegen wird auch das Folgende gehen.

1978 war es den Teilnehmern am 2. Marburger Siegelsymposion noch nicht durchweg bewußt, daß die Begriffe Technik und Stil in der ägäischen Glyptik untrennbar zusammengehören. Das zeigt die im 1. Beiheft des CMS 1981 abgedruckte Diskussion nach dem Referat von Eberhard Thomas »Zu stilistischen Gruppen und zu Werkstätten neupalastzeitlicher Glyptik« [1]. Heute kann man davon ausgehen, daß eine Aussage, wie sie Paul Yule nur wenig später in seiner Dissertation formuliert hat, »Technique and style are inextricably linked to each other« [2], allgemein anerkannt wird. Beiträge wie der von John Betts zum 3. Marburger Symposion, »Seals of Middle Minoan III: Chronology and Technical Revolution«, haben die auf das mittelminoische Material gegründete Feststellung Yules weiter erhärtet [3]. Für die 'talismanischen' Siegel und für die Gruppe des 'Cut Style' ist die feste Verbindung von Technik und Stil spätestens seit der Dissertation von Artemis Onassoglou ebenso selbstverständlich [4]. John Boardmans Begriff 'Cut Style' steht für einen Stil, dessen auffallendstes, aber nicht alleiniges Merkmal unverwechselbar charakteristische Cuts sind [5]. Der Begriff 'Talismanischer Stil' steht für einen Stil, der eine seit Evans 'talismanisch' genannte Motivgruppe charakterisiert [6]. Beides sind Stile und beide Stile sind von technischen Merkmalen geprägt. Das technische Kennzeichen ist allerdings nur in dem Begriff 'Cut Style' enthalten, während der Begriff 'talismanisch' für den anderen Stil auf die fragwürdige Bezeichnung der betreffenden Motive als 'talismanisch', d.h. magisch zurückgreift. Auf die Problematik einer solchen Stilbezeichnung wird am Ende noch einmal zurückzukommen sein.

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1 CMS Beih. 1, 239.

2 Yule, ECS 206.

3 CMS Beih. 3, 1ff.

4 Onassoglou, DtS 190ff. – Ebenda 190 Anm. 1012 wird zum Begriff 'Stil' in der Siegelforschung auch allgemein Stellung genommen.

5 Vgl. ebenda 191.

6 Zur 'talismanischen' Technik s. ebenda 7. 32. 171ff. 187ff. 191 und 196.

Zunächst möchte ich aber auf die Verwendung des Begriffes Stil im Bereich der minoischen und mykenischen Siegelkunde eingehen. Als Definition schlage ich vor: »Stil bezeichnet in der ägäischen Glyptik die Art und Weise, wie zu gegebener Zeit und an gegebenem Ort mit Hilfe vorhandener Werkzeuge und technischer Fähigkeiten sowie aufgrund eines bestimmten gestalterischen Willens ein (vielleicht schon vorhandenes) Motiv ausgeführt worden ist.« Stile können in der ägäischen Glyptik benannt werden

1) nach dem Material des Siegels: z.B. Elfenbein, Bein, Holz, Weichstein, Hartstein, Metall, Glas;
2) nach technischen Merkmalen des Siegelbildes: z.B. 'Hoop and Line', 'Cut', 'Drill';
3) nach eigenwilligen Wiederholungen bestimmter stilistischer Merkmale: 'Leistenstil';
4) nach Qualitätsmerkmalen des Siegelbildes: z.B. 'Fine', 'Plain', 'Common', 'Cretan Popular', 'Mainland Popular';
5) nach Zeitstufen (Zeitstil): z.B. früh, mittel, spät, primitiv, archaisch, klassisch;
6) nach landschaftlichen Merkmalen (Regionalstile): z.B. kretisch (ostkretisch etc.), festländisch, kykladisch;
7) nach Werkstätten: z.B. 'le style des sceaux de l'Atelier' (Mallia);
8) nach dem formalen Charakter der Motive: z.B. hieroglyphisch, naturalistisch (bzw. naturnah), manieristisch, auflösend, abstrakt, schematisch, körperlich, plastisch, malerisch.

Im Vordergrund stehen Gesichtspunkte, die auf das Material (1), das Werkzeug und die Technik = manner = treatment (2) sowie auf künstlerische Eigenheiten/Eigenwilligkeiten (3), weiterhin auf Qualitätsmerkmale (4), Zeitstufen (5), Regionen (6) oder Werkstätten (7) gerichtet sind. Die Benennung von Stilen nach Motiven (etwa Volutenstil oder Ziegenstil) ist ungewöhnlich (denkbare Ausnahme: Hieroglyphenstil — vgl. 8 — ebenso eine begriffliche Verbindung von Komposition/Syntax und Stil (etwa Wirbelstil). Es ist aber üblich, einen Stil nach dem formalen Charakter der Motive zu benennen (8).

Statt von Stilen kann man auch von Stilgruppen (oder nur von Gruppen) sprechen [7]. Die Verbindung der Begriffe Stil und Gruppe läßt sich dabei sowohl im Sinne einer Erweiterung (Oberbegriff) als auch einer Einschränkung (Hauptgruppe, Unter-, Nebengruppen) des jeweiligen Stils gebrauchen. Ähnlich ist es bei anderen Wortverbindungen mit Gruppe. Deshalb ist es nützlich, auch den Begriff Gruppe (vgl. Gattung, Klasse, Komplex, Cluster) zu umreißen. Als Definition schlage ich vor: »Eine Gruppe läßt sich in der ägäischen Glyptik bilden, wenn mehrere Siegel durch eine bestimmte Gemeinsamkeit zusammengeschlossen werden können«. Der Begriff Gruppe ist weiter und unverbindlicher als der Begriff Stil. Gruppen können in der ägäischen Glyptik benannt werden

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7 Vgl. ebenda 190 Anm. 1012. – Yule, ECS 206ff. – Gruppen statt Künstler und Werkstatt: J.G. Younger in: CMS Beih. 3, 287. – Stilgruppen statt Stilphasen: Verf. in: CMS Beih. 1, 239.

1) nach Siegeltypen: z.B. Petschaft, Prisma, Amygdaloid etc. — etwa 'The Group of Archaic Prisms I/II' (Boardman);

2) nach dem Material: z.B. Jaspis;

3) nach Bildmotiven (Motivgruppen): z.B. geometrisch, ornamental ('the quatrefoil Group'), hieroglyphisch, (archi)tektonisch, figürlich (Tier/Mensch), naturalistisch (bzw. naturnah), kultisch, talismanisch/magisch;

4) nach Komposition/Syntax: Gruppen mit unendlichem Rapport, mit zentrifugalen, zentripetalen, kreuzförmigen Kompositionen;

5) nach einem Fundort (Fundkomplex): z.B. 'Mesara' (Boardman), 'Mallia Workshop Complex' (Yule), 'Hieroglyphic Deposit Group' (Yule);

6) nach einer Sammlung, die ein besonders typisches Beispiel der betreffenden Gruppe besitzt;

7) nach bestimmten Darstellungen, die eine Gruppe besonders gut charakterisieren: z.B. 'Parading Lions' (Yule), 'Platanos Goat Complex' (Yule), 'The Elegant Twins from Kea' (Younger);

8) nach einem für die betreffende Gruppe charakteristischen Detail: z.B. 'Spectacle-Eye-Group' (Younger);

9) nach einer auf die betreffende Gruppe zutreffenden Eigenart: z.B. 'Floating Figures Group' (Yule);

10) nach einer Periode;

11) nach einem Stil (Stilgruppe): z.B. 'The Island Sanctuaries Group' (Younger), »A large Stylistic Group of the Late XVth Century« (Younger), 'Talismanic Style', 'Cut Style', 'Mainland Popular Group' (Younger).

Einzelne der von uns zu Stil und zu Gruppe angeführten Qualifikationen lassen die Wahl zwischen beiden Kategorien zu, z.B. der Bezug auf das Material oder auf bestimmte formale Details, bzw. Eigenarten (soweit diese nicht eindeutig stilistisch, d.h. technisch bedingt sind). Mit dem Begriff Stilgruppe kann man — wie gesagt — stilistisch verwandte Siegel(bilder) zu einer mehr oder weniger großen Einheit verbinden. Motive von Siegelbildern werden — wie gleichfalls schon erwähnt — grundsätzlich ebensowenig mit dem Begriff Stil verbunden wie Formen der Komposition/Syntax. In beiden Fällen bietet sich aber der Begriff Gruppe an. Auf die Ausnahme des 'talismanischen' Stils soll im folgenden ausführlicher eingegangen werden.

Das Verhältnis zwischen Stil und Motiv ist in der ägäischen Glyptik nirgends so ambivalent wie in der 'talismanischen' Gruppe. Hier sollen nach der jetzt gängigen Auffassung nämlich erst Stil und Technik (manner) ein Motiv zu einem 'talismanischen' gemacht haben. Die Vorstellung von einem talismanischen Motiv an sich ist heute zumindest problematisch,

während Evans bei seiner Bezeichnung 'talismanisch' doch zunächst von den Motiven ausgegangen ist [8]. Als ein magisch anmutendes Mischwesen könnte für den minoischen Kreter z.B. der Greif ein talismanisches Motiv an sich gewesen sein. J. Betts hat ihn auch für ein solches gehalten [9]. Nach A. Onassoglou aber ist der Greif »stilistisch eigentlich kein 'talismanisches' Motiv« [10], d.h. Darstellungen des Greifen zeigen in der Glyptik der betreffenden Zeit nicht die Stilmerkmale der 'talismanischen' Siegel. Der Siegelschneider hat nach dieser Auffassung also erst mit einer unverwechselbaren, sich stilistisch auswirkenden Technik (manner) ein an sich geeignetes Motiv (z.B. den Vogel) zu einem 'talismanischen' gemacht.

Das Beispiel eines Ziegentypus, der eigentlich nichts Magisches an sich zu haben scheint, zeigt allerdings, daß auch ein solches Motiv der 'talismanischen' Stilgruppe zugeschrieben werden kann; in diesem Falle nämlich deshalb, weil der Künstler durch »drei kugelige Löcher« (Pini) auf dem Körper der Ziege eine Technik angewandt hat, die sonst nur für anerkannte 'talismanische' Siegel verwendet worden ist [11]. Ein Motiv wie das Schiffsmotiv hat — nach A. Onassoglou — auch schon Evans »weniger aus inhaltlichen als aus stilistischen Gründen« in die 'talismanische' Gruppe eingereiht [12]. Eine Vermischung von Stil und Motiv hat es in der Beurteilung dieser Klasse also schon von Anfang an gegeben. Ein circulus vitiosus konnte und kann aus einer solchen Vermischung dann entstehen, wenn die Zugehörigkeit zur Gruppe willkürlich einmal vom Motiv und einmal vom Stil her begründet wird [13]. Arthur Evans, Victor E.G. Kenna, Agnes Xenaki-Sakellariou und Jannis A. Papapostolou haben, bei unterschiedlichen Auffassungen im einzelnen, Technik und Stil der 'talismanischen' Siegel für sekundär gehalten, für ein Mittel zum Zweck [14]. Für A. Onassoglou ist der Stil aber wichtiger als der Inhalt. Sie stellt fest, daß sich der Begriff 'talismanisch' »von einem primären Inhaltsbegriff (talismanisch = magisch) zu einem Stilbegriff« wandelt [15]. An dieser Entwicklung hat J. Boardman einen nicht unerheblichen Anteil gehabt, weil er die Technik und damit den Stil als den 'dominant factor' für die Entstehung der 'talismanischen' Gruppe gesehen hat [16]. Daß er mit seiner Auffassung dabei zu weit in die eine Richtung gegangen ist, konnte A. Onassoglou überzeugend darlegen [17]. Wesentlich bleibt das eigentümlich ambivalente Verhältnis zwischen Motiv und Stil, Stil und Motiv.

Generell gesehen ordnet sich in der ägäischen Siegelkunst »die Art der Ausführung« (=manner = Technik = Stil) dem Bildmotiv mehr oder weniger unter [18]. Die Technik kann

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8 Vgl. Onassoglou, DtS 2.

9 Vgl. ebenda 9f.

10 Ebenda 10.

11 Vgl. I. Pini in: CMS Beih. 1, 238. – Onassoglou, DtS 129. – Zu den 'talismanischen' Ziegen jetzt ausführlich: E.F. Bloedow, JPrehistRel VI, 1992, 15ff.

12 Onassoglou, DtS 29.

13 Vgl. ebenda 4.

14 Vgl. ebenda 1ff. 8f.

15 Ebenda 129.

16 Boardman, GGFR 44.

17 Onassoglou, DtS 187ff. 198.

18 »Die Art der Ausführung«: Formulierung für Stil/Technik von I. Pini in einem Diskussionsbeitrag: CMS Beih. 1, 238.

dem Motiv dienen, dieses aber auch dominieren. Je natürlicher (z.B. Tiere), bzw. vollkommener (z.B. Ornamente) die Motive sind, desto größer ist die Unterordnung des Technischen. Erst bei zunehmender Stilisierung (Schematisierung, Abstraktion, Auflösung usw.) tritt das Technische mehr und mehr hervor, bis es — wie bei den 'talismanischen' Siegeln — fast zum Selbstzweck wird.

Es gibt Motive, die bestimmte Techniken voraussetzen. Entscheidend wichtig war aber zunächst das Material des Siegels. Auf Holz, Elfenbein, Bein und auf weichen Steinen oder auf Metall sind die Anforderungen an die Technik selbstverständlich sehr viel geringer als auf harten Steinen. Der Wunsch, Siegelbilder in harte Steine zu arbeiten, mußte in einer Zeit, in der generell weiche Materialien verwendet worden sind, entweder die Wahl und die Ausführung der Motive sehr einschränken, oder er machte, wenn der künstlerische und qualitative Standard mindestens gehalten werden sollte, eine Verbesserung der Technik zur Voraussetzung — wobei Technik nicht nur die Werkzeuge, sondern ebenso deren Handhabung meint [19].

Die auch in diesem Kreis gelegentlich gestellte Frage, ob die technischen Neuerungen vor einem stilistischen Umbruch stehen mußten oder umgekehrt [20], läßt sich, denkt man über einen solchen Prozeß nach, m.E. so beantworten, daß grundsätzlich die technischen Neuerungen die Voraussetzung gewesen sind. Erst die Auseinandersetzung zwischen Werkzeug und Siegelmaterial, erst das technische Voranschreiten Schritt um Schritt konnte — ungeachtet der Motive — einen neuen Stil mit sich bringen [21]. Das ist in der ägäischen Glyptik gewiß nicht anders gewesen als später etwa bei der Erfindung des Bronzehohlgusses, der erst für Greifenköpfe von Greifenkesseln und erst dann auch für Darstellungen des Menschen angewendet worden ist. Auch an die Erfindung und Verwendung von Musikinstrumenten mag man denken. Eine Sonate für das Hammerklavier setzt dieses Instrument selbstverständlich voraus. Im Falle des schnell laufenden Bohrers der Glyptik wird man allerdings auch an wichtige welchselseitige Einflüsse zwischen Siegel- und Keramikwerkstätten denken. Dabei könnte die Erfindung der schnell rotierenden Drehscheibe in den Töpfereien älter gewesen sein als die des schnell laufenden Bohrers.

Erst ein neues Motiv und dann die erforderliche Technik, das ist in der ägäischen Glyptik wohl nur dort denkbar, wo es darum ging, ein in einer anderen Kunstgattung (etwa in der Vasen- oder Wandmalerei) entwickeltes Motiv in ein Siegelbild umzusetzen. In solchen Fällen konnte die Motividee selbstverständlich älter sein als die technischen Voraussetzungen für deren Verwirklichung in der Siegelkunst.

Der Umgang mit neuen technischen Errungenschaften und Möglichkeiten, waren sie erst einmal da, mußte natürlich auch zu neuen Stilrichtungen führen, an die bei der technischen Erfindung noch gar nicht gedacht worden ist: etwa zu naturalistischen, plastischen, malerischen, schematischen oder manieristischen Stilrichtungen. Bei der Beurteilung des künstle-

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19 Vgl. J. Betts in: CMS Beih. 3, 9ff. (Technical Developments).

20 Ebenda 16.

21 Vgl. Yule, ECS 206: »any change in technique or material shall have a direct effect on the appearance of the motif«. – Zu den Techniken vgl. u.a. P. Yule – K. Schürmann in: CMS Beih. 1, 273ff. – J.H. Betts in: CMS Beih. 3, 9ff. – Zum Bohrer mit zentraler Spitze: I. Pini in: CMS II,2 XVIf. mit Abb. 1.

rischen Ergebnisses ist wiederum an die wichtige Rolle von Vorbildern anderer Kunstzweige zu denken, gleichzeitig aber auch daran, ob der Siegelschneider mehr das konvexe Relief des Siegelabdrucks als die konkaven Formen auf seinem Siegel vor Augen hatte. Bei entsprechenden Überlegungen denkt man vor allem an technisch perfekt gearbeitete figürliche Siegelbilder mittel- und spätminoischer Zeit, Siegelbilder also, die ein kunsthistorisch orientierter Archäologe gern mit Stilbegriffen wie plastisch, malerisch usw. verbindet [22]. Technisch perfekt sind aber auch mittelminoische Ornamentkompositionen, die wir zum Teil nur von Tonabdrücken nicht mehr erhaltener Siegel aus weichem Material (auch Holz) kennen [23]. Hier ist — seit Friedrich Matz — das Interesse aber weniger auf Stil als auf Komposition und Syntax gerichtet, die im Zusammenhang mit dem Begriff Stil keine unmittelbare Bedeutung haben [24].

Abschließend soll noch einmal vom 'talismanischen' Stil die Rede sein, weil dieser Begriff deutlich problematischer ist als die meisten anderen Stilbegriffe. 'Talismanisch' fehlt oben bei den Qualifikationen zur Benennung eines Stils, weil den 'talismanischen' Stil — wie wir gesehen haben — nach überwiegender Auffassung viel weniger die fragwürdigen 'talismanischen' (= magischen) Motive ausmachen, als technische Merkmale wie die Art der Benutzung von Bohrern und Rädchen. Deshalb ist natürlich zu fragen, ob man den betreffenden Stil nicht besser gleich nach einem technischen (=stilistischen) Charakteristikum — wie beim Cut Style — benennen sollte. In diesem Sinne habe ich einmal 'Drill Style' vorgeschlagen [25]. Umfassender, aber nicht spezifisch genug, wäre 'schematischer Stil' [26]. Wahrscheinlich wird es trotz solcher Vorschläge aber bei dem jetzt eingebürgerten Begriff bleiben — und das ist auch kein Malheur, wenn man ihn als den eigentümlichen Stil der 'talismanisch' genannten Motivgruppe definiert [27].

Lassen Sie mich hier aber doch noch einen Augenblick ausschweifen. Ließe man bei 'talismanisch' die Anführungszeichen weg, so würde die Bezeichnung talismanischer Stil besagen, daß dieser Stil als solcher talismanisch, d.h. von magischen Kräften ist, nicht erst beim Tragen oder Verwenden (z.B. Siegeln) des geschnittenen Steines, sondern schon beim Bohren und Feilen, bzw. durch das Bohren und Feilen. Das Bohren und Feilen wäre eine magische Handlung gewesen, so etwa wie das Deklamieren eines Zauberspruchs oder das Malen einer Ikone. Ich glaube, der Reverend Kenna, dessen Ideen von uns vielleicht doch allzu pauschal abgelehnt worden sind, hat den Begriff talismanischer Stil so oder ähnlich verstanden, wenn er geschrieben hat: »The attempt to reproduce a form thought to be responsible for a magical quality would lend itself to the invention of a particular style associated with amuletic or talismanic use« [28]. Inzwischen glauben die wenigsten an einen magischen

22 Vgl. E. Thomas in: CMS Beih. 1, 236.

23 Auch Holz als Material früher Siegel: Hood, APG 216. 231f.

24 Vgl. Yule, ECS 1f. und 185ff. – s. auch Verf. in: CMS Beih. 1, 189ff.

25 'Drill Style': Verf., Gnomon 60, 1988, 432. – Zur dominierenden Rolle des Bohrens für die 'talismanischen' Siegelbilder s. Onassoglou, DtS 171ff.

26 'Schematischer Stil' vgl. ebenda 129.

27 Vgl. zu dieser Formulierung ebenda den ersten Satz auf S. 171.

28 Kenna, CS 1 Anm. 3.

Charakter aller sogenannten talismanischen Steine. Auch A. Onassoglou möchte, ebenso wie Stylianos Alexiou, »nicht allen als talismanisch angesprochenen Motiven eine magische Deutung« zuerkennen [29]. Sonst wären die Anführungszeichen, die man heute fast durchweg setzt, ja auch wirklich überflüssig. Man könnte — wie Evans — frank und frei von einer talismanischen Gruppe, Gattung, Klasse etc. sprechen, von einem talismanischen Stil – wie gesagt – allerdings auch nur dann, wenn man Grund zu der Annahme hätte, daß bereits die Arbeit des Siegelschneiders etwas Magisches, Talismanisches an sich hatte. Daß die Forschung jemals soweit kommen wird, hier die Wahrheit zu ergründen, ist unwahrscheinlich. Wie sollten wir überhaupt evident talismanische Siegel in des Wortes reiner Bedeutung herausfinden können, wenn sich noch nicht einmal Technik und Stil der betreffenden Klasse sicher genug einschätzen lassen — was J. Betts zeigt, wenn er in CMS X außer »in the talismanic manner« (womit er doch Technik und Stil meint) auch die Formulierung »perhaps in the talismanic manner« gebraucht [30]. Man wird also am besten bei den unbequemen Anführungszeichen für 'talismanisch' bleiben, ob es sich um Gruppe, Motive oder Technik und Stil handelt.

Ich hoffe, mit diesem Thema die Diskussion um begriffliche, terminologische Probleme hier und da etwas gefördert und vor allem zu weiteren Überlegungen und Diskussionen angeregt zu haben.

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29 Onassoglou, DtS 195f.

30 Vgl. CMS X Nr. 114. 115. – s. auch V.E.G. Kenna, The Cretan Talismanic Stone. SIMA XXIV (1969) 30: »quasi – talismanic«.

ZUR GLYPTIK DER ZWEITEN PHASE DER SPÄTMINOISCHEN PERIODE

EBERHARD THOMAS

In der Einleitung zu CMS II,4 hat Ingo Pini im Zusammenhang mit der Erörterung der chronologischen Ordnung der spätminoischen Glyptik in einer umfangreichen Liste auch Siegel aufgeführt [1], die durch den Kontext in die zweite Phase der spätminoischen Periode (SM II) datiert werden können und die daher die Grundlage für weitere Erörterungen zur Chronologie abgäben. Dabei gilt es aber von vornherein zu bedenken, daß einzelne Fundzusammenhänge kaum oder nur sehr bedingt etwas über Herstellungs- und Benutzungszeiträume aussagen können [2]. Weitergehend wäre also zu fragen, ob über die bloßen Daten hinaus durch diese Stücke Anhaltspunkte für eine ungefähre Vorstellung von den glyptischen Erzeugnissen dieser Zeit gewonnen werden können.

Bei den betreffenden Stücken handelt es sich zunächst um acht aus Knossos, je vier aus dem 'Unexplored Mansion' und aus dem Sanatoriumsgrab III, deren Kontexte ausschließlich der zweiten Phase der spätminoischen Periode angehören [3]: ein Bergkristall-Amygdaloid mit einem ornamentalisierten vegetabilischen Motiv [4], ein Fluorit-Lentoid mit der Darstellung eines liegenden Löwen nach rechts, der den Kopf zurückgewandt hat [5], ein Karneol/Achat-Lentoid, das eine von einem Geschoß getroffene Ziege nach links zeigt [6], und ein nur mäßig erhaltenes und daher kaum beurteilbares Serpentin-Lentoid mit der Wiedergabe eines Vierfüßlers, wohl eines Huftieres [7], ein aus Sard gearbeitetes Rollsiegel mit zwei Löwen-,

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* Abbildungsnachweis: *Abb. 1:* P. Warren, ARepLondon 1982/83, 68 Abb. 15; *Abb. 2:* ebenda 77 Abb. 35; *Abb. 8:* M.R. Popham, BSA 69, 1974, Taf. 38d; *Abb. 9:* ebenda Taf. 38e; *Abb. 10:* A. Lembessi, Prakt 1976, Taf. 226 = H.W. Catling, ARepLondon 1977/78, 64 Abb. 113. Die Abdruckphotos stammen aus dem Archiv des CMS.

1 CMS II,4 S. XXXIf.

2 Zur Datierung von Siegeln nach Fundzusammenhängen vgl. vor allem W.-D. Niemeier in: CMS Beih. 1, 91ff.

3 J.H. Betts in: Popham, MUM 187ff. Taf. 184f.; CMS II,3 Nr. 62–65.

4 Betts a.O. 187 Taf. 184a (P 64).

5 Betts a.O. 187 Taf. 184c (M 35).

6 Betts a.O. 187 Taf. 184d (J/K 3), von der Bildunterschrift abweichende Angabe im Text zur Datierung des Fundzusammenhangs.

7 Betts a.O. 187 Taf. 184b (H 104). – Die beiden Stücke Betts a.O. 187 Taf. 185a (P 136) – ebenfalls Widerspruch zwischen Text und Bildunterschrift im Hinblick auf die Datierung des Kontextes – und Taf. 185b (H 50) bleiben zunächst beiseite, da der Kontext nicht sicher, nur wahrscheinlich als der zweiten Phase der spätminoischen Periode (SM II) zugehörig angegeben ist.

einer Wasservogel- und einer Ziegendarstellung [8], ein dreiseitiges, aber lediglich auf zwei Seiten graviertes Sardonyx-Prisma, das einen gelagerten Stier mit einer Pflanze und einen sitzenden, von einem Speer getroffenen Löwen zeigt [9], ein Achat-Lentoid mit dem Bild der von Greifen begleiteten Potnia Theron [10] und ein Sard-Lentoid mit der Wiedergabe zweier gelagerter Stiere [11].

Abb. 1 Iraklion, Mus., Inv. Nr. 2798.

Abb. 2 Iraklion, Mus., Inv. Nr. 2993.

Desweiteren sind die Stücke zu nennen, deren Kontexte einen etwas größeren Zeitraum als die zweite Phase der spätminoischen Periode umspannen: ein Serpentin-Lentoid mit einem sich am Kopf kratzenden Hund aus der 'Stratigraphical Museum Excavation' zu Knossos *(Abb. 1)*, dessen Kontext in die ersten beiden Phasen der spätminoischen Periode (SM I–II) datiert wird [12], ein Lentoid mit der Darstellung einer Frau, die einen auf den Hinterbeinen aufgerichteten Vierfüßler zu halten scheint *(Abb. 2)*, ebenfalls aus der 'Stratigraphical Museum Excavation', dessen Kontext jedoch in die zweite und den Beginn der dritten Phase der spätminoischen Periode (SM II–IIIA) gesetzt wird [13], und zwei Siegel aus dem 'Gold Cup Tomb' zu Knossos, Ajios Iannis, ein Sard-Amygdaloid mit einem nach links liegenden Löwen, der den Kopf zurückgewandt hat [14], und ein Achat-Lentoid, das einen einen Stier reißenden Löwen wiedergibt [15]; der Kontext der beiden letztgenannten Stücke läßt sich lediglich auf die Zeit zwischen der späten ersten und der beginnenden dritten Phase der spätminoischen Periode (SM IB–IIIA1) eingrenzen.

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8 CMS II,3 Nr. 65.
9 CMS II,3 Nr. 64.
10 CMS II,3 Nr. 63.
11 CMS II,3 Nr. 62.
12 P. Warren, ARepLondon, 1982/83, 65. 68 Abb. 14–15.
13 Warren a.O. 69. 77 Abb. 34–35.
14 CMS II,3 Nr. 61.
15 CMS II,3 Nr. 60.

Auf den ersten Blick scheint die Aufstellung ein verhältnismäßig uneinheitliches Bild zu vermitteln; bei einer genaueren Analyse zeigt sich jedoch, daß sich die Stücke aufgrund von Stilmerkmalen ordnen und in größere stilistische Gruppen eingliedern lassen.

Von einer 'expressiven' Formgebung sind die beiden aus der 'Stratigraphical Museum Excavation' stammenden Siegel bestimmt [16]; Einzelformen scheinen zur Hervorhebung von Charakteristika fast übertrieben stark 'modelliert'. Die Hundedarstellung bietet durch die Drehung aus der Tiefe des Bildraumes und durch Überschneidung bzw. Staffelung einen komplizierten, gleichwohl treffenden Bewegungsablauf, der dem Rund des Bildfeldes angepaßt ist. Die Stücke gehören zu einer größeren Gruppe von Siegeln, bei denen durch die betont plastische Wiedergabe von Einzelformen Akzente gesetzt sind und der Ausdruck gesteigert ist [17], bildhafte und bewegte Kompositionen vorherrschen und eine gewisse Räumlichkeit angestrebt ist. Typisierte Handlungsbilder religiöser und höfischer Thematik und Tierdarstellungen, die die Eigenart des jeweiligen Tieres deutlich herausstellen, wobei allerdings stets nur auf die zum Verständnis des Bildes unbedingt notwendigen Einzelheiten geachtet wird, kennzeichnen die Ikonographie der Gruppe. Was die Zeitstellung dieser Gruppe angeht, kann festgestellt werden, daß der größte Teil der Siegelabdrücke von Ajia Triada, zu denen auch als unmittelbar vergleichbar Siegelabdrücke mit Hundedarstellung gehören [18], ihr zuzuordnen ist, d.h. die zugehörigen Siegel vorzugsweise in der ersten Phase der spätminoischen Periode gebraucht worden sein dürften. Bestätigt werden kann dieser Zeitansatz unter anderem auch durch ein Vergleichsstück zu dem Siegel mit der ein Tier haltenden Frau, das im 'House of the Frescoes' zu Knossos gefunden wurde [19], dessen Baugeschichte zu einer Datierung des Siegels in die erste Phase der spätminoischen Periode (SM I) berechtigt. Die beiden Siegel aus der 'Stratigraphical Museum Excavation' dürften also sehr wahrscheinlich früher entstanden sein, als es der datierte Befund zunächst nahelegt.

Ähnlich verhält es sich mit dem unter den hier zu erörternden Stücken für sich stehenden [20], das zur Gruppe der sogenannten talismanischen Siegel zu zählen ist [21]. Diese im Laufe ihrer Entwicklung anscheinend von unterschiedlich starken 'abstrahierenden' Tendenzen geprägte Stilgruppe hatte nach Ausweis der Mehrzahl der Kontexte ihre Blütezeit wohl ebenfalls innerhalb der ersten Phase der spätminoischen Periode (SM I). Zum direkten Vergleich sei auf durch den Fundzusammenhang datierte Siegelabdrücke aus einem in Chania ausgegrabenen Archiv hingewiesen [22].

Innerhalb der Gruppe der sogenannten talismanischen Siegel, die man vielleicht treffender als Gruppe eines 'abstrakten Stils' bezeichnen könnte, lassen sich drei verschiedene Richtun-

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16 Warren a.O. Abb. 14–15. 34–35.

17 Zu dieser von 'expressiven' Formen bestimmten Gruppe vgl. E. Thomas, Die kretischen Siegel der Zeit der älteren und jüngeren Paläste. Stilgeschichtliche Studien (in Druckvorbereitung).

18 D. Levi, ASAtene 8/9, 1925/26, 110 Abb. 100 Taf. 9 Nr. 82.

19 CMS II,4 Nr. 111. Vgl. auch CMS II,3 Nr. 117 aus Aj. Triada und CMS II,4 Nr. 204 aus Gournia, die aufgrund der wahrscheinlichen Fundzusammenhänge ebenfalls in die erste Phase der spätminoischen Periode (SM I) zu datieren sind.

20 Betts a.O (oben Anm. 3) Taf. 184a (P 64).

21 Vgl.Onassoglou, DtS Taf. 20.

22 Papapostolou, Sphragismata Taf. 34–35; vgl. Onassoglou, DtS Taf. 20,11–12.

gen beobachten, die jedoch nicht klar gegeneinander abgegrenzt werden können, sondern sich teilweise überschneiden: eine graphisch-lineare Richtung, für die ein flaches Relief charakteristisch ist [23], eine weitere, die tief eingeschnittene Ornamentformen, vor allem Punkte, Kreise und Lünetten, aufweist und zu weitgehender 'Abstraktion' neigt [24], und schließlich eine dritte, die zu natürlicheren Formen zurückzukehren beginnt und eine wohl abgewogene, freilich stilisierte Formengebung zeigt [25].

Abb. 3 CMS X Nr. 277b.

Abb. 4 Sakellariou, CollGiam Nr. 185a.

Mit letzterer Richtung verwandt, von ihr abhängig oder aus ihr entwickelt ist der Stil von vier der eingangs aufgeführten Siegel, die aufgrund ihrer charakteristischen Merkmale in einer Gruppe vereinigt werden können [26]. Es sind die Ziegen- und Löwendarstellungen – in einem Fall mit dem Bild eines Vogels verbunden – , die bei flachem Relief eckig, mitunter zackig zusammengesetzte Körperformen und graphisch schematisierte Details aufweisen. Sie gehören einer größeren von J. Boardman mit der Bezeichnung 'Cut Style' versehenen stilistischen Gruppe an [27], die einerseits durch die genannten formalen Eigenschaften, andererseits durch die Bevorzugung lentoider und auf der Rückseite profilierter amygdaloider Formen sowie durch die häufige Verarbeitung harter Halbedelsteinsorten — oft Karneol — gekennzeich-

23 Vgl. z.B. E. Thomas in: CMS Beih. 1, 227 Abb. 1 (= Onassoglou, DtS Taf. 47,1).

24 Vgl. etwa CMS XII Nr. 179 (= Onassoglou, DtS Taf. 28,4).

25 Vgl. beispielsweise CMS XII Nr. 158 (= Onassoglou, DtS Taf. 59,77); dieses Stück könnte auch zu zwar mit dem 'abstrakten' Stil verbundenen, aber jüngeren, aufgrund der Formengebung als fortgeschritten anzusehenden Arbeiten gezählt werden, die sich ebenfalls in einer Gruppe zusammenfassen lassen; vgl. dazu die folgenden Bemerkungen.

26 CMS II,3 Nr. 65; Betts a.O. (oben Anm. 3) Taf. 184c (M 35). Taf. 184d (J/K 3); CMS II,3 Nr. 61.

27 Boardman, GGFR 48; die Bezeichnung 'Cut Style' kann jedoch als nur bedingt treffend angesehen werden, da damit der Aspekt der technischen Ausführung gegenüber dem des künstlerischen Ergebnisses zu sehr betont erscheint. Zudem finden sich neben den 'cuts', den schmalen Schnitten vor allem die charakteristischen häufig winklig aneinandergefügten wulstartigen Rillen und auch kugelige sowie gelegentlich kreisförmige Bohrungen für die Angabe von Details. Zur Kritik am Begriff 'Cut Style' vgl. auch Betts a.O. (oben Anm. 3) 188.

net ist [28]. Bevorzugt scheinen Löwen, Ziegen, Vögel und Greifen dargestellt worden zu sein *(Abb. 3–4)*, wobei es sich mehr oder weniger um 'Zustandsbilder' handelt. Unmittelbar vergleichbare Siegelabdrücke aus dem bereits genannten Archiv von Chania zeigen [29], daß Siegel dieses Stils vereinzelt bereits in der fortgeschrittenen ersten Phase der spätminoischen Periode (SM IB) gebraucht wurden; andererseits scheint die Mehrzahl der aus Kontexten stammenden Stücke darauf hinzuweisen, daß der Produktionsschwerpunkt für diese Siegel in die zweite Phase der spätminoischen Periode (SM II) fällt [30]. Bei den Stücken dieser Gruppe, die auf dem helladischen Festland oder auf den Inseln gefunden wurden [31], handelt es sich aller Wahrscheinlichkeit nach um exportierte minoische Stücke [32].

Zu einer weiteren stilistischen Gruppe lassen sich die noch verbleibenden vier der genannten aus Fundzusammenhängen stammenden Siegel vereinigen [33]. Ihr Stil ist durch kräftige, klare plastische Formen gekennzeichnet, die gelegentlich den Eindruck des Massigen mit Zügen zum 'Monumentalen' vermitteln. Durch punktförmig gegebene Einzelheiten sind oftmals Akzente gesetzt. Eine gewisse Tendenz zu einer realistischen Darstellungsweise kann beobachtet werden. Die Kompositionen sind bewegt und erscheinen mitunter schwungvoll, ohne daß dadurch die Geschlossenheit der Bilder beeinträchtigt würde. Durch Überschneidungen und Rückansicht wird Räumlichkeit suggeriert. Die Bilder sind sorgfältig in lentoide Flächen — in einem Fall zwei Seiten eines dreiseitigen Prismas — eingepaßt, die im Verhältnis zu der bis dahin in der minoischen Glyptik üblichen Praxis auffallend groß sind [34]. Als Material ist — mit einer Ausnahme: Sardonyx — Achat verwendet worden. Löwen und Stiere — sitzend, liegend und im Kampf miteinander — und eine von Greifen begleitete Potnia Theron bilden die Themen der Darstellungen.

Auch diesen Stücken aus datierbaren Fundortzusammenhängen lassen sich aufgrund des Stils weitere zuordnen; eine umfangreichere Gruppe läßt sich zusammenstellen *(Abb. 5–7)* [35].

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28 Vgl. z.B. Boardman, GGFR Taf. 83. 84. 143. 146. 147; Thomas a.O. (oben Anm. 23) 227ff. mit Anm. 8f. Abb. 3–20; CMS I Nr. 146. 406. 206. 494; I Suppl. Nr. 84. 132. 38. 64. 116; II,3 Nr. 95. 181. 355. 354. 194. 132. 53. 94. 254. 250. 78. 350. 192. 257. 120. 222. 279; II,4 Nr. 168. 130. 180. 183. 152. 191; IV Nr. 260. 265. 266; V Nr. 174. 605. 439. 208. 590. 684. 437. 438. 725. 750. 193. 192; VII Nr. 120. 165. 164. 122. 135. 151. 152; VIII Nr. 57. 88 (= CMS XI Nr. 120). 155. 158; IX Nr. 61. 104. 105. 110a; X Nr. 277. 318. 248. 289. 267. 134. 1. 132. 264. 293. 319. 123; XI Nr. 127. 180. 241. 96. 279. 328. 179. 182. 254. 297. 175. 45. 130; XII Nr. 141. 162. 189. 219. 233. 211; XIII Nr. 118. 24; Kenna, CS Taf. 12 Nr. 299; 18 Nr. 11P; Sakellariou, CollGiam Taf. 26 Nr. 335; 30 Nr. 418–421. Vgl. auch das in Anm. 25 genannte Stück CMS XII Nr. 158. Weitere meist vor allem in der Qualität der Ausführung abweichende Arbeiten lassen sich anfügen.

29 Papapostolou, Sphragismata Taf. 24–25. Vgl. auch CMS II,3 Nr. 257 aus Mochlos.

30 Vgl. auch das Siegel Betts a.O. (oben Anm. 3) Taf. 185a (P 136), das im 'Unexplored Mansion' zu Knossos in einem Kontext gefunden wurde, der wahrscheinlich ebenfalls der zweiten Phase der spätminoischen Periode (SM II) angehört.

31 Vgl. z.B. Thomas a.O. (oben Anm. 23) 227 Anm. 8; 230 Anm. 9. Unter den bisher veröffentlichten überwiegen die kretischen Stücke, soweit Herkunftsangaben vorliegen.

32 Oder zumindest um Arbeiten kretischer Handwerker. Vgl. auch Betts a.O. (oben Anm. 3) 189.

33 CMS II,3 Nr. 60. 62–64.

34 Die Durchmessermaße liegen zwischen 1,9 und 3,5 cm.

35 Vgl. E. Thomas in: CMS Beih. 1, 232ff. mit Anm. 14–16 Abb. 28ff.; vgl. auch die im Hinblick auf die motivisch entsprechenden Darstellungen weitgehend übereinstimmende Zusammenstellung von J.G. Younger in: CMS Beih. 3, 339ff. 351f. Darüber hinaus können beispielsweise folgende Stücke zugeordnet werden: CMS I

Abb. 5 CMS XI Nr. 55a.

Abb. 6 CMS XI Nr. 55b.

Abb. 7 CMS II,3 Nr. 271.

Großflächig geschwungene, klar gegliederte und kräftig gewölbte Körperformen bestimmen stets die Darstellungen der Tiere; im Gegensatz dazu stehen oftmals nur durch dicke Punkte gegebene Einzelheiten und die fast graphisch wirkende Angabe von Extremitäten, der eine sparsame Verwendung von Binnengliederungen entspricht. Mit der spannungsgeladenen Plastizität wird auch die Wirkung einer gewissen Räumlichkeit erzielt, die durch mehrschichtige Kompositionen und Bildgedanken noch verstärkt werden kann. Besonders beliebt scheinen Bildmotive mit Löwe und Stier gewesen zu sein; die Löwen sind oft sitzend gegeben, die Stiere ruhig gelagert, einzeln oder paarweise, wobei bei dem hinteren Tier der Kopf abgewendet wiedergegeben ist; die Gruppe des einen Stier reißenden Löwen ist öfter in einer die Tierleiber sich überkreuzenden Komposition dargestellt. Ein eigenartiges, widersprüchlich wirkendes Bild ist das des über einem gelagerten Stier 'schwebenden' Stierspringers oder -fängers *(Abb. 7)* [36]. Als Bildflächen wurden gewöhnlich die runden verhältnismäßig großformatiger Lentoide [37] und als Material sehr häufig transluzider grauer bis brauner Achat mit weißen Einschlüssen verwendet. Die meisten Stücke, deren kretische Herkunft bekannt ist, wurden in Knossos und Umgebung gefunden, einige im südlichen Mittelkreta, wenige in Ostkreta. Für die zu dieser Gruppe zu zählenden Stücke von den Inseln und vom helladischen Festland gilt sicherlich ebenfalls noch, daß es sich um minoische Arbeiten handelt, die entweder exportiert oder von auf dem Festland tätigen kretischen Handwerkern ausgeführt sind [38]. Der weitere chronologische Rahmen des Kontextes für das Lentoid mit der Tierkampfdarstellung aus dem 'Gold Cup Tomb' von Ajios Jannis

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Nr. 276; I Suppl. Nr. 77. 76. 112; II,3 Nr. 118. 41. 100. 129. 173. 27. 271. 21; II,4 Nr. 118; V Nr. 216. 589. 680. 235. 688. 666. 314; IX Nr. 136; X Nr. 216. 316; XI Nr. 53. 169. 129; Sakellariou, CollGiam Taf. 26 Nr. 302; A. Onassoglou in: CMS Beih. 3, 187ff. Abb. 1. 8; M.S.F. Hood, ARepLondon 1959/60, 23f. Abb. 27.

36 CMS II,3 Nr. 271.

37 Die selten verwendete amygdaloide Form zeigt eine profilierte Rückseite; die wenigen dreiseitigen Prismen sind stets nur auf zwei Seiten graviert.

38 s. unten S. 248.

(SM IB–IIIA1) könnte einerseits dafür sprechen [39], daß Siegel dieses Stils bereits gegen Ende der ersten Phase der spätminoischen Periode (SM IB) benutzt wurden [40]. Andererseits könnte mit einer Benutzungs- und vielleicht auch Herstellungsdauer von Siegeln dieses Stils noch bis in den Beginn der dritten Phase der spätminoischen Periode (SM IIIA1) gerechnet werden. Gestützt wird diese Überlegung durch mehrere stilistisch zugehörige Stücke, die aus in die dritte Phase der spätminoischen Periode datierten Befunden geborgen wurden. Als Beispiele seien die Lentoide aus Kammergrab B von Katsambas oder aus Grab 4 von Knossos, Sellopoulo genannt [41].

Es zeigt sich also, daß es sich bei den aufgelisteten Siegeln, die in Kontexten der zweiten Phase oder in Kontexten der Zeit zwischen der späteren ersten und der frühen dritten Phase der spätminoischen Periode gefunden wurden, teilweise um stilistisch recht unterschiedliche Arbeiten handelt. Sie lassen sich jedoch – vor allem auch mit Hilfe weiterer Stücke – zu vier Gruppen gliedern. Für zwei von ihnen, – eine von 'expressiven' und eine von 'abstrakten' Formen bestimmte –, dürfte die Blütezeit noch in die erste Phase der spätminoischen Periode und damit noch in die Zeit der jüngeren Paläste fallen. Vier Stücke gehören einer Gruppe an, deren Stil eine Fortentwicklung des 'abstrakten' Stils darstellt [42] und die teils in der ersten, teils in der zweiten Phase der spätminoischen Periode anzusetzen ist [43], d.h. in der kunstgeschichtlichen Entwicklung der minoischen Glyptik besteht keinerlei Bruch zwischen dem Ende der jüngeren Paläste und der zweiten Phase der spätminoischen Periode. Nur bei der vierten Gruppe scheint es sich im wesentlichen um Arbeiten zu handeln, die in der zweiten Phase der spätminoischen Periode entstanden sind. Andererseits sind anscheinend auch die beiden letztgenannten Gruppen durch 'Übergangsstücke' miteinander verbunden. Die Darstellung des liegenden Löwen auf dem Amygdaloid aus dem 'Gold Cup Tomb' steht einerseits in der Tradition der fortentwickelten 'abstrakten' Stilrichtung [44], weist andererseits in Einzelzügen und in der weiter gelockerten Stilisierung auf die 'pralle' Plastik der großformatigen Siegel der zweiten Phase der spätminoischen Periode voraus. Dagegen hängen die schlanken

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39 CMS II,3 Nr. 60.

40 Vgl. auch CMS II,3 Nr. 21; Hood a.O. (oben Anm. 35); ders., ARepLondon 1961/62, 27. 29 Abb. 38; CMS II,1 Nr. 419 und die allerdings schwer zu beurteilenden Siegelabdrücke aus Aj. Triada, D. Levi, ASAtene 8/9, 1925/26, Taf. 11 Nr. 58. Taf. 8 Nr. 59. Fraglich ist, ob den ikonographischen auch stilistische Übereinstimmungen entsprechen. Vgl. auch das aus stilistischen Gründen möglicherweise ebenfalls früher anzusetzende Siegel CMS II,3 Nr. 119 aus Aj. Triada.

41 CMS II,3 Nr. 129; M.R. Popham, BSA 69, 1974, 218 Abb. 14A Taf. 38c. f. Vgl. auch CMS II,3 Nr. 100; II,4 Nr. 118.

42 Mehrseitige Siegel, bei denen eine Seite in 'abstraktem' ('talismanischem') Stil, eine Seite im 'Cut Style' ausgeführt ist, belegen darüber hinaus die zeitliche Nähe der beiden Stile: CMS IX Nr. 110; Kenna, CS Taf. 7 Nr. 147d (?); die Vogeldarstellungen Evans, PM IV 542 Abb. 495 (= Onassoglou, DtS Taf. 51,28) und CMS X Nr. 277 (= Onassoglou, DtS Taf. 53,63) sind wohl eher der Gruppe des 'Cut Style' als der Gruppe des 'abstrakten' ('talismanischen') Stils zuzuordnen. Vgl. Onassoglou, DtS 191f.; I. Pini, CMS II,3 S. XLIf.; ders., CMS II,4 S. XXXIX. Daß die Zuordnung Schwierigkeiten bereitet, mag als weiterer Hinweis auf Verwandtschaft und Abhängigkeit der beiden stilistischen Gruppen voneinander angesehen werden. Eine Mischung beider Stile scheint in dem Bild des Siegels CMS II,3 Nr. 269 vorzuliegen.

43 Onassoglou, DtS 192 nahm an, daß der 'Cut Style' sogar schon in der frühen ersten Phase der spätminoischen Periode (SM IA) aus dem 'talismanischen' Stil entwickelt worden sei.

44 CMS II,3 Nr. 61.

Körperformen der Greifen und die sehr gleichmäßige Anlage des Gefieders ihrer Flügel wie überhaupt die Neigung zu einem gewissen Schematismus in der Potnia Theron-Darstellung auf dem Lentoid aus dem Sanatoriumsgrab III zu Knossos umgekehrt noch mit der aus dem 'abstrakten' Stil abgeleiteten Richtung zusammen [45]. Daß mit diesem Siegelbild der die Gruppe prägende Stilcharakter noch nicht vollständig erreicht ist, erweist ein mit dem gleichen Motiv ausgestattetes, ebenfalls verhältnismäßig großes Karneol-Lentoid aus der Höhle von Psychro [46].

Diese Erscheinungen sind zugleich ein Beleg dafür, daß die Siegel, die in der zweiten Phase der spätminoischen Periode hergestellt und/oder gebraucht wurden, als Erzeugnisse minoischer künstlerischer Traditionen anzusehen sind, d.h. zu stilistischen Gruppen gehören, die partiell nebeneinander bestehend bzw. einander überschneidend jeweils einen bestimmten Platz innerhalb einer mehr oder weniger kontinuierlichen Entwicklung einnehmen, und daß stilistisch entsprechende, außerhalb von Kreta gefundene Stücke daher von kretischen Künstlern gefertigt worden sein werden. Gelegentlich fällt lediglich die höhere Qualität der Ausführung bei auf den Inseln oder dem Festland gefundenen Stücken auf [47]. Möglicherweise handelt es sich um Werke minoischer Meister, die wegen veränderter Arbeits- und Auftragsbedingungen abgewandert sein könnten.

Im Hinblick auf die Frage nach der Glyptik der zweiten Phase der spätminoischen Periode hat die Untersuchung ergeben, daß anscheinend im wesentlichen zwei unterschiedliche Stilrichtungen die Glyptik dieser Zeit prägen und diese dadurch erkennbar macht. Die eine Richtung hat ihre Wurzeln noch in der ersten Phase der spätminoischen Periode (SM IB–II), die andere reicht noch bis mindestens in den Beginn der dritten Phase der spätminoischen Periode (SM II–IIIA), wenigstens was den Zeitraum der Benutzung der Siegel angeht. Siegel der beiden stilistischen Gruppen wurden also zeitweise nebeneinander gefertigt; die Stilrichtungen überlappen einander; mitunter hat es den Anschein, als ob sich die Handwerker gegenseitig beeinflußt hätten, oder es handelt sich in diesen Fällen um Stücke, die möglicherweise den Übergang von der einen zu der anderen Richtung bezeichnen.

Mit dem vor allem von ausgeprägter Plastizität und großformatigen Bildern bestimmten Stil treten innerhalb der zweiten Phase der spätminoischen Periode zwar Neuerungen ein; diese stehen jedoch in der Tradition der kretischen Siegelschneidekunst und sind in die Entwicklung der spätminoischen Glyptik eingebunden.

In wie starkem Maße dies zutrifft, wird auch durch Siegel bestätigt, die, soweit sie aus chronologisch eingrenzbaren Befunden stammen, in großer Zahl in den Beginn der dritten Phase der spätminoischen Periode (SM IIIA1) datiert werden können *(Abb. 8–9)* [48]. Was die Formengebung angeht, könnte man von naher Verwandtschaft, von Fortentwicklung oder auch nur von einer Stufe innerhalb einer größeren stilistischen Gruppe sprechen, deren An-

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45 CMS II,3 Nr. 63.

46 Boardman, GGFR Taf. 145.

47 Vgl. z.B. CMS I Nr. 144. 145; V Nr. 654.

48 Beispielsweise Popham a.O. (oben Anm. 41) 218 Abb. 14B Taf. 38b.e; 218 Abb. 14C Taf. 38a.d; CMS II,3 Nr. 52. 101. 106–112; II,4 Nr. 16. 17; J.A. Sakellarakis, ILN 26.3. 1966, 33 Abb. 7; ders., Prakt 1966, 178 Taf. 148β; S. 181 Taf. 149γ.

fänge in die Zeit der zweiten Phase der spätminoischen Periode fallen. Zu der betonten Plastizität der Flächenformen treten nun ornamentale Details, wobei Kreis- und Punktformen bevorzugt werden. Dieser 'Ornamentalisierung' der Formen entspricht häufiger auch eine der Kompositionen *(Abb. 10)*, was vor allem in gegensinniger Anordnung, in symmetrischem Bildaufbau und in der Verwendung oftmals ornamentaler Füllmotive zum Ausdruck kommt [49]. In Bezug auf Ikonographie und Typologie lassen sich keine oder nur wenige Veränderungen feststellen. Das Tierbild steht weiterhin im Vordergrund des bildnerischen Interesses [50], ebenso die mit dem Lentoid verbundene runde Bildfläche, die ebenfalls in Verbindung mit dem dreiseitigen lediglich auf zwei Seiten gravierten Prisma Verwendung findet [51]; als Neuerung könnte das vermehrte Auftreten von Kissenformen angesehen werden [52]. Vorherrschend scheinen weiterhin die verhältnismäßig großen Formate. Als Material sind nach wie vor transluzide Achate besonders beliebt. Der weitaus größte Teil der Siegel dieser Stilstufe — zu den Stücken aus Fundzusammenhängen lassen sich zahlreiche weitere mit (und auch ohne) Herkunftsangabe ordnen [53] — wurde im südlichen und nördlichen Mittelkreta gefunden, die meisten in Knossos und Umgebung. Und schon die anscheinend verhältnismäßig geringe Anzahl von auf dem helladischen Festland gefundenen Stücken dieses Stils dürfte dafür sprechen, daß auch diese Siegel noch minoischen Ursprungs sind.

Abb. 8 HM Inv. Nr. 2384.

Abb. 9 HM Inv. Nr. 2383.

Abb. 10 HM Inv. Nr. 2624.

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49 CMS II,3 Nr. 107–110. 112b; Popham a.O. Taf. 38b.e; Sakellarakis a.O. Taf. 148β; vgl. etwa auch H.W. Catling, ARepLondon 1977/78, 64 Abb. 113; CMS I Suppl. Nr. 109; II,3 Nr. 115. 133; V Nr. 318; VII Nr. 123; XI Nr. 63. 186. 197; XII Nr. 288. 227; Boardman, GGFR Taf. 123.

50 Auffallend ist die mehrfache Verwendung des Motivs des halbtierischen, halbmenschlichen Mischwesens: z.B. Catling a.O.; CMS II,3 Nr. 67; VII Nr. 123; Boardman, GGFR Taf. 129; Sakellariou, CollGiam Taf. 28 Nr. 379.

51 CMS II,3 Nr. 112; vgl. auch Sakellariou, CollGiam Taf. 22 Nr. 190.

52 CMS II,3 Nr. 52; vgl. beispielsweise auch CMS II,3 Nr. 69; CMS V Nr. 297; XII Nr. 263; leicht abgewandelt: z.B. CMS II,3 Nr. 68; V Nr. 674; VII Nr. 98.

53 Vgl. die umfangreiche, allerdings nicht in jedem einzelnen Fall überzeugende Zusammenstellung von Younger, Aegean Seals V, 119ff. und CMS XI Nr. 171. 184. 211. 320. 321; V. Karageorghis, BCH 112, 1988, 846f. Abb. 87.

Beide Stilstufen zeichnen eine straffe Formengebung und 'monumentalisierende' Züge aus; die 'Dynamik' der Kompositionen der früheren Stufe wird durch ornamentalisierend-manieristische Tendenzen bei der späteren gebremst. In ihrem repräsentativen Charakter entspricht die in zwei stilistische Stufen gliederbare Glyptik, die innerhalb der zweiten und in der beginnenden dritten Phase der spätminoischen Periode (SM II/IIIA1) anzusetzen ist, den Formen und dem Dekorationsstil der knossischen Palaststilkeramik, die — in den Traditionen der minoischen Keramikproduktion stehend — in vergleichbarer Weise sowohl von monumentalisierenden als auch von ornamentalisierenden Zügen geprägt ist [54]. Und wie die Palaststilkeramik scheint die etwa gleichzeitig entstandene Glyptik in starkem Maße die Repräsentationsbedürfnisse einer Oberschicht widerzuspiegeln. Daß es Siegel waren, die von einer führenden Schicht benutzt wurden, läßt sich etwa auch daran ablesen, daß die aus Gräbern stammenden Stücke anscheinend durchweg zu mit reichen Beigaben versehenen Bestattungen gehörten.

54 Vgl. W.-D. Niemeier, Die Palaststilkeramik von Knossos, AF 13 (1985) passim.

EVIDENCE FOR SEAL USE IN PRE-PALATIAL WESTERN CRETE

MARIA VLASAKI – ERIK HALLAGER

At present, there is a debate concerning the use of seals in pre-palatial Crete. Judith Weingarten, on the one hand, argues that seals, although produced since the beginning of EM II, were not used for administrative purposes until the foundation of the palaces. [1] Ingo Pini, on the other hand, maintains that the seals had been used for administrative purposes ever since the Minoans started to produce seals. [2]

In this paper we shall concern ourselves with those 'sealings' and sealed objects from relatively certain pre-palatial contexts *(Fig. 1)* – thus leaving out of the discussion more than half of the seal impressions (with EM seal-devices) listed by Pini in his discussion of the problem.

Fig. 1 Map of Crete with Pre-palatial sites with evidence for use of seals.

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* Two of the Khamaleuri sealings were discovered in March 1992, only seven months before this symposium. We are grateful to the organizer, Professor J.-Cl. Poursat, for inviting us to present the material here. Likewise we are greatly indebted to Dr. Ch. Kritzas of the Heraklion Museum and epimeletria Ioanna Serpetsidaki for permitting and facilitating our study of the comparative material with such a short notice as was the case. A similar thank is due to Professor C. Davaras for helping us in the Agios Nikolaos Museum. Likewise, we wish to thank Judith Weingarten for correcting the English text. The photographs from the site of Khamaleuri are by Maria Vlasakis. The drawings of the sherds RM 13248 and KH Π 6635, and the spindle whorl RM 13247 are by Voula Vrondaki, while the remaining photographs and drawings are by E. Hallager.

1 J. Weingarten in: ASSA 105f.

2 I. Pini in: ASSA 34ff.

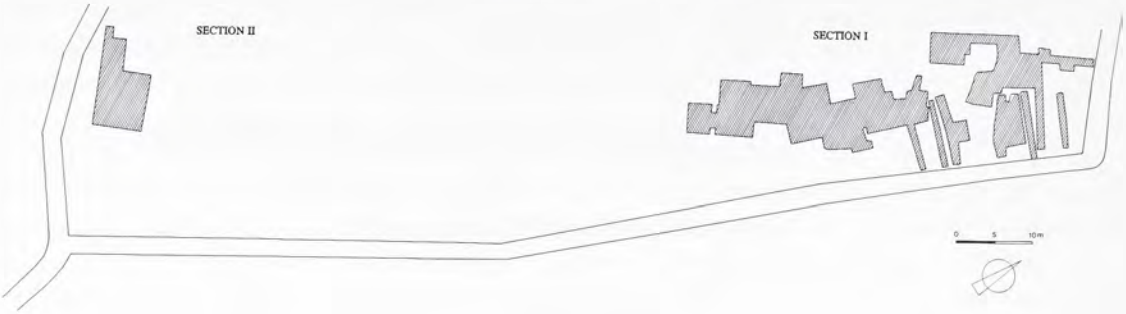

Fig. 2a Khamaleuri. General map of the site.

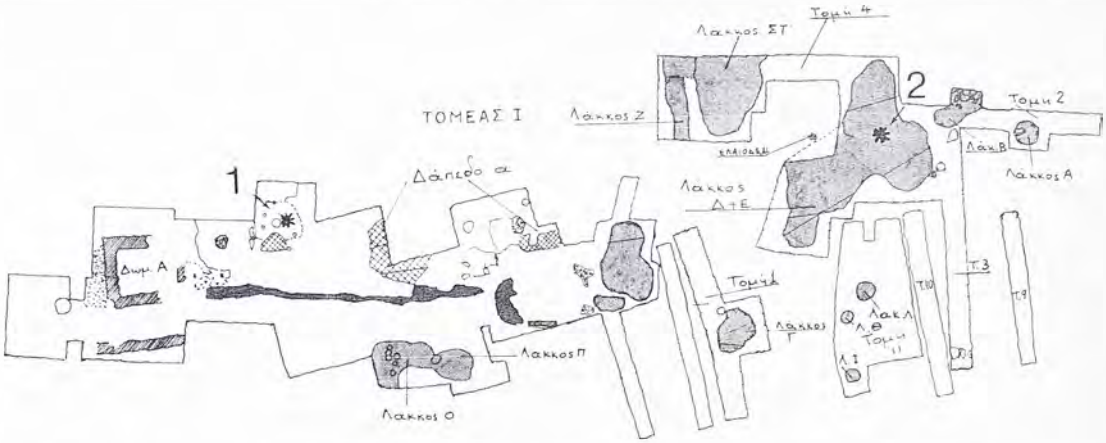

Fig. 2b Section I with indications of the find spots of the sealings: 1. Spindlewhorl RM 13247; 2. The sealing RM 13249.

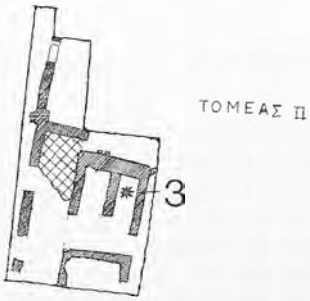

Fig. 2c Section II with indication of the find spot of the sealing: 3. The plate fragment RM 13248.

Table 1 List of sites with pre-palatial use of seals.

Mus. No.	Place	Context	Date	"S"	Other
HM 432	Sphoungaras	Cemetery	MM I?	x	
HM 1177	Archanes	Phourni	MM IA	x	
HM 2934	Archanes	Phourni	EM III/MM IA	x	
HM 1099	Knossos	S edge of Palace	EM III	x	
HM 4814	Palaikastro	House D 32	EM		loom weight
–	Palaikastro	Kastri	EM III/MM IA		jar handle
??	Trypiti	settlement	EM I/II	x	
ANM 3237	Myrtos	settlement, Room 29	EM II	x	
??	Pyrgos	Mno MP 73/257	EM III/MM I		jar handle
??	Mallia	(no 290)	EM/MMI?		jar handle
??	Mallia	(no 195)	EM/MMI?		cubic weight
??	Mallia	Below Palace	EM/MMIA	x	
HM 3517	Khamezi	building	MM IA		loom weight
SF 10033	Knossos	W court House	EM IIA	x	
SF 211	Knossos	W court House	EM IIA	x	
RM 13247	Khamaleuri	Section I	MM IA		spindle whorl
RM 13249	Khamaleuri	Section II	EM III/MM IA	x	
RM 13248	Khamaleuri	Section I	EM III/MM IA		open vessel
XM Π 6635	Khania	GSE LM IIIB	EM/MM IA ?		open vessel
XM KH 1569	Khania	GSE, EM	EM II/III	x	
XM Π 2062	Platyvola	cave	EM II		open vessel

In this paper, we use the term 'sealing' to mean a lump of clay with one or more seal impression(s) which had been attached to another object for the purpose of security or for identification. In addition, there are seal impressions stamped on loom weights, spindle whorls, handles of vases and the interior of vases.

From Ingo Pini's list we consider the following to be from reasonably secure pre-palatial contexts *(Table 1)*: one from Sphoungaras, [3] two from Archanes, [4] one from Knossos, [5] two from Palaikastro, [6] one from Trypiti, [7] Warren's Myrtos sealing, [8] Cadogan's jar handle from Pyrgos, [9] and one certain and two possibilities from Mallia. [10] To this list can be added two EM II sealings from the West Court House at Knossos [11] and a stamped loom weight from Khamezi, [12] for a total of 15 items. In this paper, we now add 3 examples from Khamaleuri, 2 from Khania, and 1 from the Platyvola cave.

We shall first present the West Cretan evidence in some detail and afterwards discuss their possible implications together with the other pre-palatial evidence.

THE ARCHAEOLOGICAL CONTEXT

Khamaleuri

The Khamaleuri area is known in the archaeological bibliography since the 1960's as the site of an important prehistoric settlement. This was determined from an English and a German survey as well as from attempts of the local school teacher and pupils to gather

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3 HM 432. This sealing was found "in a region where the Early Minoan interments and the later (MM III/LM I) pithos burials were confused." (E. Hall, Excavations in Eastern Crete, Sphoungaras, Philadelphia 1912, 70). For two reasons the early date seems preferable: 1. The seal device appears to be pre-palatial and 2. The only comparable type of 'sealing' are the two EM III/MM IA 'sealings' from the cemetery at Archanes. (HM 1177 and 2934).

4 HM 1177, cf. Ergon 1987, 124 Fig. 151. and HM 2934, cf. Prakt 1980, 373, Pl. 218τ.

5 HM 1099, cf. M.S.F. Hood – V.E.G. Kenna in: Antichità Cretesi. Studi in onore di Doro Levi, I (Catania, 1973) 103ff. Figs. 1–2.

6 HM 4814, E. Eccles, BSA 35, 1940, 49 No. 41 Fig. 27; on the pre-palatial date: P. Warren, Kadmos 9, 1970, 31 n. 9. HM No. cf. L.H. Sackett – M. Popham, BSA 60, 1965, 304 No. 21 Fig. 18,21.

7 HM no No., cf. ARepLondon 1986/87, 57.

8 ANM 3237. cf. P. Warren, Myrtos. An Early Bronze Age Settlement in Crete (1972) 40f. 227 No. 134 Fig. 97 Pl. 77C.

9 cf. Pini (supra n. 2) 36 and n. 16.

10 Certain is M. Hue – O. Pelon, BCH 116, 1992, 31ff. Fig. 33–34. The two possibilities are J.-Cl. Poursat in: B. Detournay – J.Cl. Poursat – F. Vandenabeele (eds.), Fouilles exécutée à Mallia, Le quartier Mu, ÉtCrét 26 (1980) Nos. 290 and 295, 202 and 204; both were found out of context (p. 192) but 290 is considered to be "antérieure a la période d'occupation du Quartier Mu".

11 For the two Knossos sealings: D.E. Wilson, The Early Minoan IIA West Court House at Knossos, PhD diss. University of Cincinnati 1984 (University Microfilms 84-20922) 210f. We are grateful to David Wilson for showing us these sealings.

12 Mentioned by Eccles (supra n. 6), 48.

surface archaeological material. [13] Some locate another palatial centre of Minoan Crete here, the town of da—*22—to of the Linear B script [14] and the evidence so far supports this view. The area, of course, was inhabited continuously in Minoan times as the surface pottery proves.

M. Vlasakis began the present trial excavations in 1991 at the Bolanis site, a field owned by Mr. D. Stratidakis (132.60 x 31/17 m.). Although the long, continuing cultivation of the fertile soil resulted in very thin filling up and the destruction to a great degree of the ancient ruins, findings were as expected. We recognized architectural remains from two pre-palatial phases (transitional EM III/MM IA and advanced MM IA) as well as of the LM IIIB/C period. Between these periods (and afterwards) the site was uninhabited and unused.

In Section I the remains of EM III/MM IA period consisted mainly of big rubbish pits *(Fig. 2b)* with a very few wall foundations. We are now starting to uncover a MM IA settlement, probably of an industrial nature, that functioned in an open, specially arranged area. The excavated area revealed a long cobbled path, north of which were three hearths of different constructions: one rectangular hearth made of mud bricks, a second elliptical hearth of red clay, and a four-sided hearth with shallow cavities at its edges made of a combination of yellow soft limestone (kouskouras) and red clay. All hearths have stone outlines and bedding. We have also been able to distinguish other fire-spots and remains of small wall foundations of an improvised construction.

At the west of the section is a four-sided room and the beginnings of a second room, divided by the cobbled path. There are many burnt clay utensils, some of which will probably help in the identification of the type of industrial activity carried out on the site. The big pits with their large quantities of pottery are still unexplained, but they do explain the abundant surface ceramic finds we have always observed here. The settlement seems to have been suddenly abandoned at the end of the MM IA phase.

LM IIIC1 habitation is evidenced only from circular pits of quite different construction than those of EM/MM. The later pits are of rather small size, containing grey burnt soil, broken pottery and bones. Excellent examples of the pottery phase have been uncovered here. It seems that these diggings were not rubbish pits (as were the EM/MM pits) but contained ritual cult materials, similar to the pits elsewhere in the Rethymnon district, at Sybritos on the peak of the Kephala hill. [15]

In Section II *(Fig. 2c)*, at the west side of the field, part of a MM IA building has been uncovered, along with some EM III/MM IA finds *(Fig. 3)*. An impressive, long descending

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[13] W. Schiering – W. Müller – W.-D. Niemeier, AA 1982, 17ff.

[14] J. Bennet in: Texts, Tablets and Scribes. Studies in Mycenaean Epigraphy and Economy (1988) 38 and n. 63; id., AJA 89, 1985, 238; J. Moody, The Environmental and Cultural Prehistory of the Khania Region of West Crete. Neolithic through Late Minoan III. PhD diss. University of Minnesota 1987, Appendix IV; J. Chadwick in: Antichità Cretesi. Studi in onore di Doro Levi, I (1973), 199ff. The tablets mention mainly sheep/wool textiles, olives, grain and aromatics (Cyperus rotundus). See also M. Andreadaki-Vlasaki in: Ειλαπίνη. Τόμος τιμητικός για τον καθηγητή Νικόλαο Πλάτωνα, 1987, 55ff. Figs. 1–5 and Pls. 1–16.

[15] N. Metaxa-Prokopiou in: La transizione dal Miceneo all'Altro Arcaismo. Dal palazzo alla città (1991) 373ff.; Κρητική Εστία 2, 1988, 313 Pl. 10 and 3, 1989/90, 275 Pl. 7.

open slab area is probably a street running between two houses. No furnishings were found in the rooms; there are no signs of fire nor of earthquake to justify their abandonment at the end of MM IA, at the same time as in section I.

When the site was re-inhabited in LM IIIC1, a section of the old MM IA foundations was partly reused by a new house currently being excavated; this extends mainly west of the slab area, so the eastern part of the excavation preserves the MM IA remains at the same level as its neighbouring LM IIIC1.

The first of the Khamaleuri sealings is a spindle whorl (RM 13247) *(Fig. 6)* found at a depth of 0,27 m. on hearth No. 3 (with the circular cavities); hearth's depth: 0,35 m. *(Fig. 2b)*. The spindle whorl's surface is partly burnt, probably as a result of its position on the hearth. Many obsidian flakes and three pieces of stone vases were also associated with the hearth. An MM IA jug was found in situ beside the SE corner of the hearth. Other sherds from the area are seen on *Fig. 4*. Immediately to the east is a pit filled with pottery, contemporary or older. The inside of the hearth is unexcavated, so we do not yet know any structural details. The hearth was on the same floor level as the other two hearths described above; there was a fire spot with many obsidian flakes at its west side. This hearth seems to have had the same industrial function as the other hearths, fire spots in the area of the cobbled path.

Fig. 3 Khamaleuri. Part of EM III/MM IA house in Section II.

Fig. 4 Selection of pottery found together with the stamped spindle whorl, area of hearth 3.

Fig. 5 Selection of pottery found in pit B, section II, together with the sealing RM 13249.

The second Khamaleuri seal impression (RM 13249), stamped on the interior of an open vessel *(Fig. 11)* was found in a rubbish pit east of the area of the hearths in a complex of pits of EM III/MM IA (Pit D+E) and circular diggings of LM IIIC1 date *(Fig. 2b)*. From this pit complex 660 kilograms of pottery was collected.

The third sealing (RM 13248) *(Fig. 8)* comes from a pit in the interior of the MM IA house of Section II *(Fig. 2c)*. The north part of the room was divided into two by a wall *(Fig. 3)*. Its floor lay over an EM III/MM IA pit, only the eastern portion of which has been dug. It contained a large amount of pottery *(Fig. 5)* along with two pieces of well baked clay slabs and a fragment of a stone vase.

Kastelli, Khania

Further west, in Khania, one or probably two instances of seal-use from the pre-palatial period have been discovered, both from the Greek-Swedish Excavations. One, without context, was found in 1984 in a rubbish pit of LM IIIB2 date. [16] This was a seal impression (CMS V Suppl. 1A No. 150) stamped on the interior of a large open vessel (XM Π 6635; *Fig. 14*).

The second, a 'true' sealing (XM KH 1569; *Fig. 15*) was found during rescue excavations in Odos Kanevaro in 1989. [17] It was found in the second layer below a floor of the MM IA period destroyed by fire and with complete vases *in situ*. The first layer below the MM IA floor was a level with EM III (and a few MM I sherds near the top), and the second layer below the floor where the sealing was discovered containined mainly EM II and perhaps a few sherds of EM III. In any case, the sealing is well sealed below the latest pre-palatial floor at the site, and we suggest EM III as its latest possible date.

Platyvola

Among the pre-palatial material in the cave of Platyvola, a few kilometres south of Khania, was found a tall belly-amphora with a seal(?) impression on the base. The cave seems to have been inhabited or visited from the Late Neolithic Period throughout the Bronze Age. The finds from the Old and New Palace periods are scarce, while there is abundant evidence for habitation in the Final Palatial Period (LM IIIA and B). The vase with the seal impression was dated by the excavator to the Final Neolithic period, [18] although it could be a little later.

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16 E. Hallager – Y. Tzedakis, AAA 17, 1984, 25f.

17 See E. Hallager and Y. Tzedakis, AAA 21, 1988, 17.

18 L. Godart – Y. Tzedakis, Témoignages archéologiques et épigraphiques en Crète occidentale du Néolithique au Minoen Récent IIIB (1992) 48ff. Pl. XLIII,2.

We hope that this introduction has demonstrated the pre-palatial context of the sealings to be discussed — with the exception of one from GSE.

COMMENTED CATALOGUE

Khamaleuri finds

The spindle whorl RM 12247; (Fig. 6)

Spindle whorl, completely preserved. Clay very finely gritted with few extremely fine sand corns. Light grey brownish; at bottom and lower part of side burnt dark grey to black. Pierced with vertical hole. The whole surface is covered with impressions of a seal's edge, for a total of 39 impressions — but only a small part of edge is impressed each time.

Fig. 6 Spindle whorl RM 13247 from Khamaleuri with seal impressions. Scale 1:1.

Fig. 7 Photograph and composite drawing of the seal impression found on the spindle whorl RM 13247.

The seal impressions (Fig. 7)

All 39 impressions are faint and badly preserved. Apparently, each time the same part of the rim of the seal has been impressed. The impressions seem to indicate a more or less circular flat seal (cylinder?) with an original diameter of perhaps 1.1 cm. The composite drawing of the best preserved impressions suggests a motif which may be described as branches with pointed leaves at the end, radiating from the centre of the seal. Mpd. of seals 0.9 x 0.55 cm.

Two good pre-palatial parallels for this motif may be found: on an ivory cylinder from the tholos tomb in Kalathiana (CMS II,1 No. 127) and another ivory cylinder from tholos tomb B in Platanos (CMS II,1 No. 272).

Comments: Seal impressions on spindle whorls are not common [19] but stamped loom weights are well known from the pre-palatial period until the end of LM I; there are at least three pre-palatial examples from the Aegean: Palaikastro, [20] Khamezi [21] and from Lerna III [22].

The clay sealing RM 13249; (Fig. 8a–d)

Clay sealing of unknown type. Practically completely preserved. Relatively soft, finely gritted, brick red clay. The sealing is roughly of triangular shape with ends of very different character. L. 5.6 cm; W. 3.7 cm; H. 3.1 cm.

Bottom *(Fig. 8c and 9b)*: The bottom of the clay sealing seems to have been pressed against a piece of flaked wood not more than 3 cm wide; on one side the clay goes down the side of the wood(?); on the other (front) side is a fracture which shows that it had been pressed against the wood here too.

Front *(Fig. 8a.b)*: The front is covered with seal impressions from a stamp seal (Diam. 2.5 cm) pressed four times (partly overlapping) against the front.

Right end: is unworked and below whatever was sealed.

Left end: Clearly pressed against the two objects to be sealed. All covered with finger prints.

Reverse *(Fig. 8d and 9a)*: Lower part unworked. Upper left part with imprint of the other object; the sealing is burnt black where it had touched this object. The object was rather smooth and flat with a slightly irregular right end which continued beyond the sealing to the left.

Sealing procedure *(Fig. 9)*: The angle between the edge of the wood and the smooth-surfaced object was ca. 33°, but the two objects clearly did not touch each other at the point of sealing; the 'smooth-faced' object seems to have rested on something different. The clay was pressed in between these two objects.

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19 The Khamaleuri find, to our knowledge, is the only one from a pre-palatial context; a few proto-palatial examples are known, e.g. Mallia Quartier Mu Nos. 292 and 293? cf. Poursat (supra n. 10) 204 Figs. 274. 276.

20 HM 4814, cf. Eccles (supra n. 6).

21 HM 3517, cf. Eccles (supra n. 6).

22 M.H. Wiencke, Hesperia 38, 1969, 508 No. 191. Pl. 129 (now exhibited in the Argos museum).

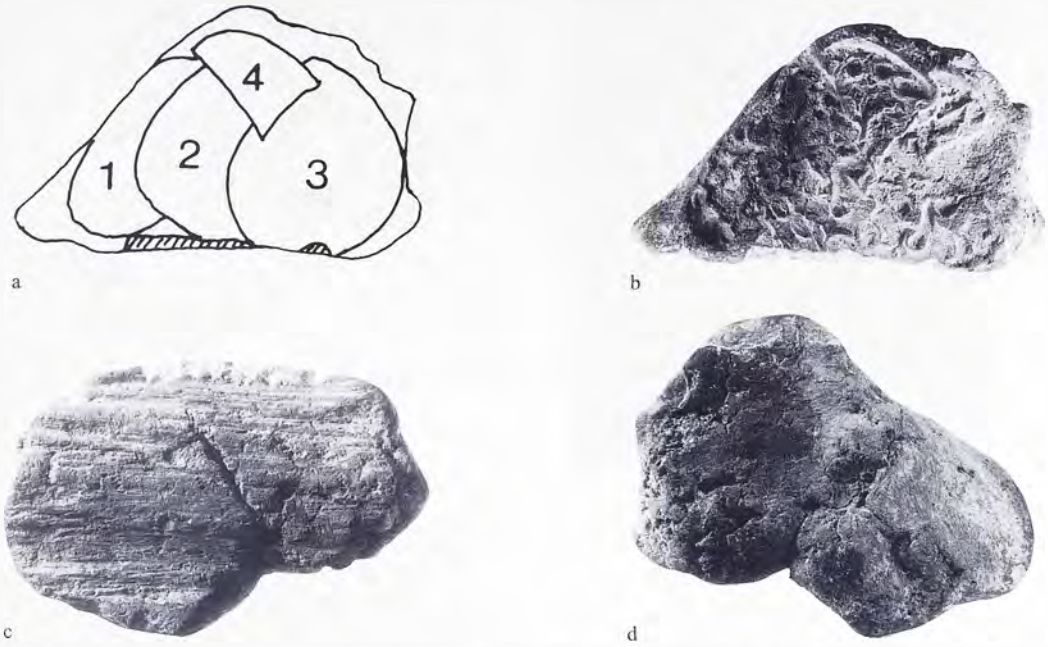

Fig. 8a–d The sealing RM 13249 from Khamaleuri.
a) schematic drawing showing the position of the 4 impressions (compare b); b) front; c) bottom; d) reverse.

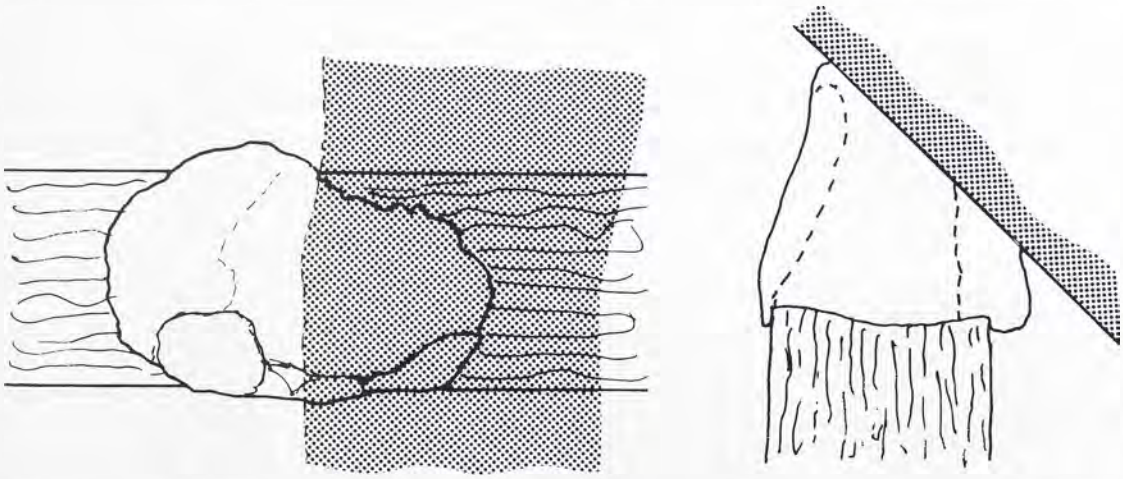

Fig. 9a.b Drawing of "position" of the Khamaleuri sealing RM 13249.

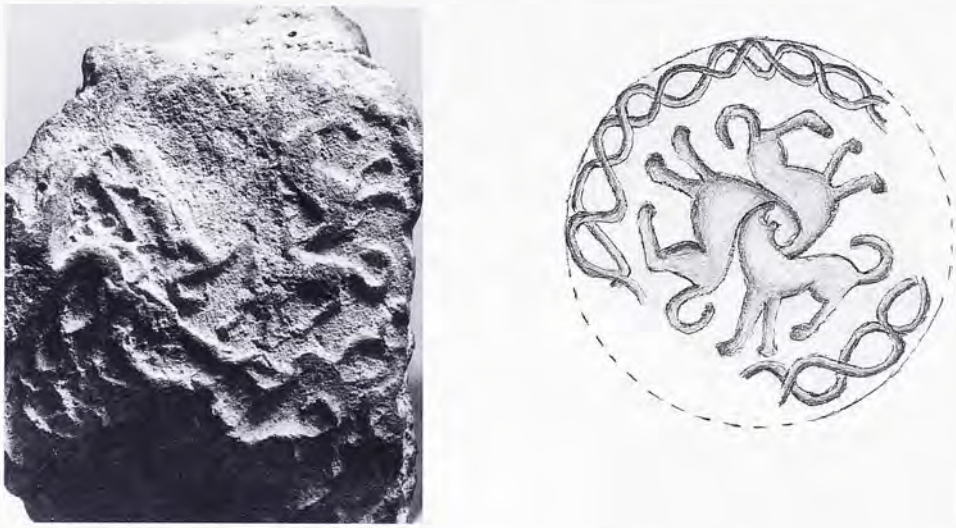

Fig. 10 Photograph and composite drawing of the seal impression on RM 13249.

Seal impressions *(Fig. 10)*: four imperfectly preserved impressions from one seal. The seal surface was very flat, indicating the use of a cylinder? Motif: a rope pattern on the edge, forming a continuous row of lying 8's. Inside, three long-necked quadrupeds (lions?) moving clockwise around the centre of the seal. Forepaws are separated while the hindleg is only shown as one; curvy tails; where visible, the heads are looking backwards *en regardant*; mouths are open. In fact the same line seems to separate the heads of two lions. Diam. 2.54 cm.

The seal-type has many pre-palatial parallels. The border-zone may be compared to CMS II,1 No. 497a and CMS II,1 No. 253. [23] The motif also has many parallels: combined border-zones and animals moving along the edge; [24] quadrupeds depicted with two forelegs and the hind-legs shown as one; [25] quadrupeds moving clockwise (on the impression) along the edge; [26] the back-turned head of the quadruped. [27] The unusual, if not unique, feature on this sealing is that the heads of the animals meet in the centre of the seal. [28]

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23 HM 1266 on an EM cylinder of unknown provenance, and HM 1044, probably a pre-palatial stamp seal from tholos A in Platanos.

24 For example from Platanos, Tholos A (CMS II,1 Nos. 251a. 253). From Tholos B at the same site (CMS II,1 No. 311a) and on a pre-palatial stamp seal from Rousolakkos, Palaikastro (CMS II,1 No. 481)

25 As for example seen on a number of seals from Drakones, H. Triada, Marathokephalo, Platanos and Palaikastro (CMS II,1 Nos. 3a. 52a. 223a. 249. 251a. 311a. 481).

26 As for example seen on CMS II,1 Nos. 3a. 52a. 251a 311a.

27 As for example CMS II,1 Nos. 224a. 408. 489.

28 We know only of one other example where part of the animals actually meet in the centre of the seal, but it is quite different from the Khamaleuri seal. It is an ivory cylinder from Archanes (HM 2253) where the long horns of four goats? join in the centre of the seal (CMS II,1 No. 382a).

Fig. 11 Drawing and photograph of the vase RM 13248 with the seal impression. Scale 1:2

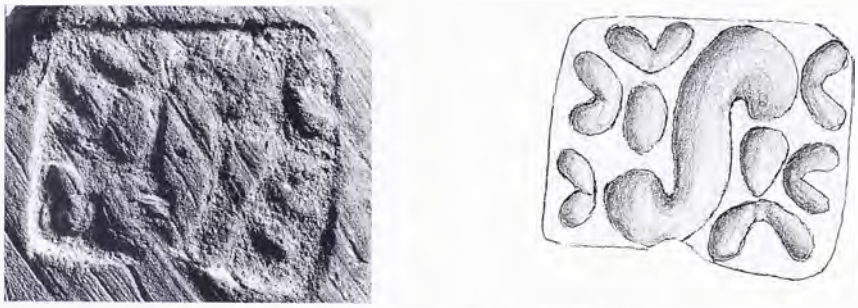

Fig. 12 Photograph and drawing of the seal impression found on the plate RM 13248.

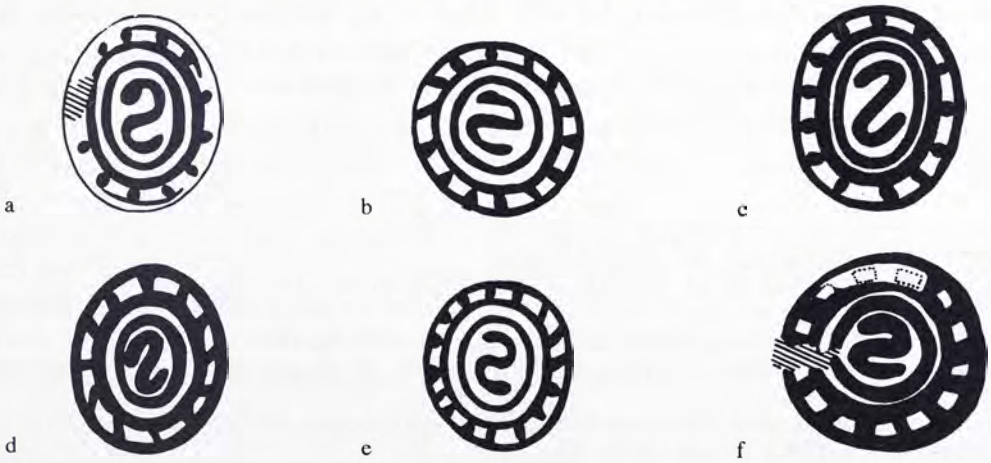

Fig. 13a-f The six almost identical seals with the simple "administrative" S.

The Plate RM 13248 (Fig. 11)

Open plate/bowl, rim fragment. Flat, slightly everted rim. Light brown clay with some holes and few larger inclusions of schist. Slightly burnt on outer part of rim. No polish or slip visible. On outside two faint lines; the vertical is probably a crack while the horizontal may have been caused by the smoothening instrument. Interior roughly 'brushed'. On interior also one completely preserved seal impression. 'Brush' marks also over seal impression. Handmade. H. 5.5 cm; W. 6.8 cm; Th. 0.7 cm.

Seal impression *(Fig. 12)*: Almost rectangular impression with flat surface — from prism? or the like. The main motif is a 'S' with a dot (or drop design) on either side. Along the edge is found a crescent shaped design — two on each short side and one on each long side. H. 2.04 cm; W. 1.8–1.6 cm.

The crescent shaped filling ornaments are quite popular on pre-palatial seals where they are described as 'double leaves'. [29] The main 'S'-motif (often remirrored, single, double or in combinations) is well attested from the pre-palatial period onwards. More often than not, the motif is — as on this seal impression — followed by additional ornaments. [30] It is interesting that this motif frequently occurs on seals with hieroglyphic inscriptions, either alone or with hieroglyphic signs. It is also incised on clay documents (KE Wc 2 and KN Wc 23) for which reason it has been argued that this sign/motif is an administrative symbol with an unknown, but specific meaning. [31] On six almost identical pre-palatial seals from Lenda *(Fig. 13b. c)*, Platanos *(Fig. 13d. e)*, [32] Krotos Kainourghiou *(Fig. 13f)* [33] and in the Mitsotakis collection *(Fig. 13a)* [34] the design is without filling ornaments, but surrounded by a circle and simple border design. It seems that identical (rather than different) designs have been attempted in these six cases which strongly indicates that these seals were produced for a purpose different from the usual one: identification of person or office. Given that the earliest hieroglyphs also go back to the pre-palatial period, [35] it would not be surprising to find that the 'S' already existed as an administrative symbol in this period.

Some of the 'S'-motifs, however, are very elaborate and with much filling design, and it may doubted whether these were not merely simple decorative designs on seals. The seal impression here under discussion — in our opinion — is on the borderline between the 'simple administrative' and 'decorative'. [36]

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29 CMS II,1 Nos. 63. 138a. 228. 251. 295a. 385. 387.

30 e.g. CMS II,1 Nos. 2. 42. 80. 92. 101. 145. 190. 204. 206. 226b. 286. 349. 449.

31 E. Hallager, BSA 82, 1987, 64ff.

32 CMS II,1 Nos. 190 *(Fig. 13c)*. 220 *(Fig. 13b)*. 270 *(Fig. 13e)*. 279 *(Fig. 13d)*.

33 EM II–III context, A. Pariente, BCH 114, 1990, 828 Fig. 204. We are grateful to Helen Hughes-Brock for this reference.

34 I. Pini in: Minoan and Greek Civilization from the Mitsotakis Collection, ed. L. Marangou (1992) Nos. 283 (coll. No. S14), 217, and CMS V Suppl. 1A No. 241.

35 For example at Archanes, see further J.-P. Olivier in: Transition 258.

36 Chr. Boulotis in his contribution at Clermont-Ferrand (not published in this volume), however, suggests that the 'S' represents snakes.

The GSE finds

The bottom of open vessel No. Π 6635 (Fig. 14)

Clay vessel, base fragment from open vessel with impression from a seal? Light red brownish, semi-coarse with schist inclusions. No slip, no paint, the fragment is only slightly curved. Hand made. Impression from 'simple' seal on the interior of the vessel. Mpd. 11.4 cm; Th. 0.7 (centre)—1.2 cm (where fragment starts to turn);

Seal impression: The impression (CMS V Suppl. 1A No. 150) is from a flat seal with raised motif consisting of a circle with a cross, with small angles in each quarter of the circle. For about 1/4 an extra thin stroke/impression is seen. Diam. of seal 3.1 cm.

Usually more elaborated variations of this design are found in the pre-palatial period. [37] One seal in the Metaxas collection, however, is extremely close to ours. [38] In this very simple form, as on Π 6635, the motif seems to disappear after the protopalatial period.

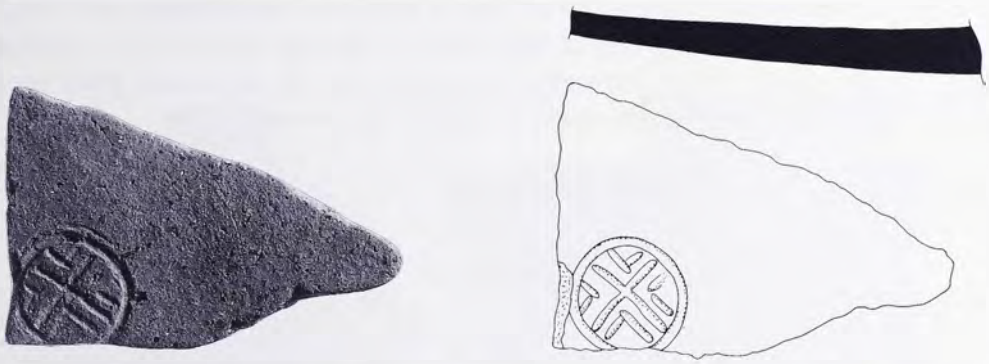

Fig. 14 Drawing of the sherd XM Π 6635 with the seal impression CMS V Suppl. 1A Nr. 150. Scale 1:2.

The clay sealing Excavation No. GSE 89-TC 37, Mus. No. KH 1569 (Fig. 15a—c).

Clay sealing — more than half preserved. Light grey/brownish clay, slightly porous, finely gritted except for few sand corns; soft and badly burnt. Irregular shape. W. 2.5 cm; L. 3.2 cm; H. 1.8 cm.

Reverse *(Fig. 15a)*: Imprints from 2 (or 3?) objects. One is a cylindrical wooden peg of which faint traces of the veins can be seen. Diam. of peg 1.7 cm. The second main object is connected to the peg and is curved in all directions. Might be from a pommel, but could also be from a large knot of leather? Where the peg and knot(?) meet there is a slight depression in the clay, perhaps indicating another folding of the knot?

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37 CMS II,1 Nos. 74. 96. 116. 288. 292. 460. 470.

38 CMS IV No. 56, said to come from Mallia.

Fig. 15a–c Reverse, obverse and preserved edge of the sealing XM KH 1569.

Sides/edge *(Fig. 15c)*: Where the clay meet the peg from outside there is only a thin edge. On the left side the rounded edge is 0.9 cm high — remaining edges broken.

Surface *(Fig. 15b)*: Slightly curved impression to the left from a string of weed/reed. Possibly another similar string is crossing at the upper part of the sealing, where broken. At the lower part of the sealing one badly preserved seal impression.

Fig. 16 Photograph and drawing of the seal impression on XM KH 1569.

Seal impression *(Fig. 16)*: one very worn impression from roughly circular seal with almost flat surface — cylinder? Calculated original Diam. 1.15 cm, in which case roughly half the seal device is preserved. Motif: impossible to determine beyond a 'Z' or zigzag line. Considering, however, that half the impression seem to be preserved the design must have been very simple, with rather thick lines, e.g. CMS II,1 Nos. 200, 218 and 246; in any case, it is too worn to justify further speculation.

Sealing procedure: Clay pressed up against object to be sealed. Apparently, after the seal was impressed one or two strings of weed/reed were bound around the object and clay to further secure it.

If the sealing procedure is correctly interpreted, it perhaps implies that the sealed object was intended for transport, in which case the single seal impression might perhaps be understood as identifying rather than actually securing (since the string did not go in or under the clay). Possibly, but not certainly, it may be a variant of Fiandra's Type B2 from Arslantepe. [39]

The Platyvola jar XM No. Π 2062 (Fig. 17).

Completely preserved tall belly-amphora with 'brush-decoration', and with a seal impression or 'potter's mark' impressed on the base. Thick whitish worn-out slip covers its surface. Clay: greyish-brown. H. 54.5 cm. Diam. of base 10.4 cm.

The 'potter's mark' *(Fig. 18)* stands out in relief and was designed in clay before the vase was fired. The motif: a triangle filled in with eight dots or ovals; outside one of the sides there is another, but probably accidental dot. The sides of the triangle are 3.8 cm , 4.0 and 3.5 cm. Although a few large 'filled-in' triangle motifs do exist in the pre-palatial period, this motif has no exact parallels. [40]

Fig. 17 The belly-amphora from Platyvola, XM Π 2062.

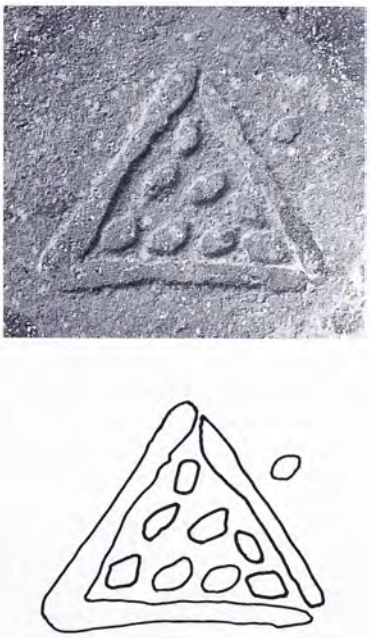

Fig. 18 The "potter's mark" on XM Π 2062.

39 P. Ferioli – E. Fiandra, Origini 1983 (1988), 455ff.
40 CMS II,1 Nos. 330. 359.

PRE-PALATIAL SEAL-USE

The six west-Cretan seal impressions increase the pre-palatial corpus by 40%; there are now 21 examples from relatively certain pre-palatial contexts *(Table 1)*. Of these, 11 are probably true sealings, while 10 are impressed on pottery, loom weights or a spindle whorl. This extremely limited amount of material, while not permitting any firm conclusions, does give us an incentive to discuss the problems they present.

Beginning with the unique spindle whorl, the obvious question is whether or not the 39 fragmentary impressions were meant as a decoration (as was probably the case with an incised spindle whorl from Myrtos) [41] or if they had the same general meaning as seal impressions on later spindle whorls and loom weights? [42] Stamped loom weights of all periods usually bear only a single, centrally placed seal impression [43] stamped before the weight was baked; for example, the EM loom weight from Palaikastro. [44] According to Poursat such impressions "suggest some sort of control and organization of the production". [45]

Poursat expresses the same opinion regarding seal impressions on vase handles and this may apply equally to impressions found on the interior of open vessels; e.g. the two examples from Western Crete. It seems still more the case with the Platyvola jar where the 'potter's mark' on the base of the vase was not intended to be visible. However, different interpretations are also possible. Could they, after all, be decorations as, for example, was suggested for mainland and Cycladic finds of stamped pottery? [46] Could they be 'potter's marks'? [47] or simple means of identifying property? These repeated seal impressions may perhaps be explained as 'decoration' or control within private household economy, or it may well have expressed some kind of administrative control within a pre-palatial community.

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41 Warren (supra n. 8) 229 No. 151 Fig. 99 Pl. 78A. As decoration is certainly also meant the many painted spindle whorls from Myrtos; e.g. Nos. 26. 157. 159.

42 see infra n. 45.

43 The spherical loom weights from Monasteraki are an obvious exception, being impressed many times.

44 Also at contemporary Lerna the system with loom weights with a single seal impression is known, cf. (supra n. 21).

45 J.-Cl. Poursat in: ASSA 55. This opinion would also be supported by HM 4815, a disk-shaped loom weight from Palaikastro (probably of proto-palatial date: Eccles [supra n. 6] Nos. 41. 48–49), both incised with the hieroglyphic sign No. 36 (B) [042 in the new edition by Olivier and Godart], and stamped by a four-sided hieroglyphic prism of which at least the trowel sign No. 18 (A/B) [044 in Olivier and Godart] can be clearly seen. For numeration of signs: Evans, SM I 187. 195 and Fig. 102; and "Tableau des signes" kindly provided to us by J.-P. Olivier.

46 Wiencke (supra n. 22) 508; slightly modified in her discussion of the entire material, 517ff. as "marks or decoration".

47 As for example argued for later periods, see for example Evans, SM I 142 in his comment on the seal impressions found on pottery from Palaikastro (No. P-143). This impression is interesting, because the same seal has been identified on three fragments of pottery found at different places in Palaikastro (cf. Eccles [supra n. 6] 47 No. 30,1–3) and because one of the impressions (No. 30,3), like the Khamaleuri find was impressed "inside rim fragment of a yellow cup". The date of the seal seem to be MM or earlier.

Turning now to the 11 true sealings, the two from Archanes and one from Sphoungaras may be isolated as a separate group [48] for two reasons: 1. they are all of the same general type: three- or four-sided, pierced at the top and with a seal impression at the bottom and 2. all three were found in cemeteries. It may be significant that similar sealing types are found at different sites, perhaps indicating a uniform administrative sealing practice.

The remaining eight sealings seem to be different from the proto-palatial types. The Trypiti sealing is a large fragment which, however, does not reveal what was sealed. [49] The Knossos sealing HM 1099 is a canonic jar stopper with a clear imprint of the rim of the jar on the reverse; this may have only been for "household management". [50] The newly-discovered Mallia sealing is fragmentary; no imprints on the reverse are preserved to show what may have been sealed. [51] The Myrtos sealing and the two Knossos sealings from the West Court House, however, are of a different character and may have had a true administrative character, although we cannot judge their precise function.

The Khamaleuri sealing is at present unique, although a fragment of a possibly pre-palatial Knossos sealing, HM 1200, could be of similar type. Furthermore, the description of two unidentified Lerna Sealing types (Type U, Nos. 142 and 143) is reminiscent of the Khamaleuri sealing. [52] It would be interesting if this were another example of uniform sealing practice at different prepalatial centres.

GSE TC 37 is the only sealing with string marks — but only on the outside of the sealing. We have suggested that this was because the object 'sealed' had to be transported. And this sealing gives us reason for two final speculations/observations:

1. From securing strings on the outside of a clay sealing to having them inside (or at the reverse), as is done in later administration, is not a very big step. Is this an example of a phenomenon which may have developed naturally into the administrative sealing system we find in the palatial periods — suggesting that the impact from the Near East may perhaps have been slightly overemphasized?

2. Are all pre-palatial sealings of local clay? If not — if the sealings have travelled some distances — they may perhaps be considered as part of a wider administrative system as may be the case in later periods. [53] In our opinions, the clay of the GSE sealing need not be local

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48 It was suggested to us that this 'group' may have had counterparts at Lerna. This comparison, however, is doubtful since the Lerna IV specimen are well burnt seals (cf. Wiencke [supra n. 22] 509 Pls. 129–130) while, to the best of our knowledge, those from Archanes and Sphoungaras are cones with seal impressions. It might be tempting to compare the Cretan sealings with the later 'medallions' – pierced clay disks with hieroglyphic inscriptions, perhaps intended as labels on commodities transported.

49 We are grateful to Andonis Vasilakis for showing us his sealing.

50 J. Weingarten in: ASSA 56.

51 Hue – Pelon (supra n. 10) 31.

52 M.H. Wiencke, Hesperia 27, 1958, 104, described as roughly triangular in section, one face with seal impression, one smooth and one with shallow diagonal reed marks. Substituting 'reed marks' by 'wood' (as probably seen on Lerna No. 130, ibid. Pl. 28), makes the similarity striking.

53 As so excellently demonstrated by Weingarten for the LM I period in: Bronze Age trade in the Mediterranean, ed. N.H. Gale, (Jonsered, 1991) 303ff., and as hinted by Kanta for the MM II period (Μοναστηράκι Αμαρίου, presented at the 7th International Cretological Congress at Rethymnon 1991).

to Khania; according to David Wilson and Peter Day, the Knossos sealing SF 211 cannot be of local Knossian clay. [54]

The increasing evidence for pre-palatial seal use helps us to understand better the nature of early sphragistic practices. The evidence of seals impressed on spindle whorls, loom weights, and jar handles (and perhaps open vessels as well) may suggest some sort of control and organization of production. Similar sealing types found in different parts of the island may indicate uniform administrative sealing practice, while imports of sealed objects may likewise indicate a need for seals in the administration of the pre-palatial society.

One general observation concerning pre-palatial 'sealings' (including most of Pini's possible pre-palatial sealings, but excluding the Archanes/Sphoungaras group) is that it is difficult to see how they were attached to the objects they sealed. None have string-marks on the reverse or inside; it is often difficult to imagine how they could have secured the integrity of the items they were applied to. Might their primary function thus have been to identify ownership or authority. [55]

We stress that the material at present does not permit more than observations and conjectural hypotheses. However, it seems to favour the idea that administration of production, trade, and perhaps storage, was needed in pre-palatial Crete and that seals — as in the later periods — were a vital instrument in this administration.

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54 We are most grateful to Peter Day and David Wilson for permission to mention this observation of theirs.

55 Also Ann Blasingham in her paper at Clermont-Ferrand (not published in this volume) indicated that the use or function of the pre-palatial seals might have been different from the one known in the following proto-palatial period.

CANONICAL, VARIANT, MARGINAL
A FRAMEWORK FOR ANALYZING IMAGERY

MICHAEL WEDDE

INTRODUCTION

Endowing mute images with speech has long been a prime concern of Aegean archaeologists. Yet nearly a hundred years of research has not created that elusive single script for the "picture book without text". [1] On the contrary, a confusion of tongues has resulted, generating a number of mutually exclusive scenarios with different finds clothed in the role of primadonna. Since the state of Aegean archaeology, or of any archaeology, precludes aiming at a single 'correct' manuscript, the doors are opened for a Babel of conflicting readings. In a world where one man's goddess is another man's priestess is another man's adorant, the most convincing method and the most authoritative handling of the evidence will go further in the struggle to attain the status of momentary gospel.

Yet the study of Aegean Bronze Age imagery lacks method in the sense that there is a disinterest in confronting the act of decoding, and the framing assumptions which direct such an activity. [2] The mechanics of pictorial exegesis is removed from the audience. The scientific narrative attempts to conceal the work of the archaeologist, and, thus, the dominant interpretations can only be comprehended in terms of results, not a process of becoming. Objectivity appears to be attained.

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* The author wishes to express his gratitude towards the organizers for the opportunity to speak at the symposion. This paper has profited from the critical remarks of Mrs Ethel Wedde. References to finger rings, seals, and sealings catalogued in the CMS are given, as customary, with volume number, part number if applicable, and catalogue number. Representations referred to with a number preceded by 'K' appear in Kenna, CS, those by 'Z' in the works cited in n. 28.

Source of illustrations: Fig. 4 by the author; remaining phothographs from the archives of CMS.

1 M.P. Nilsson dixit.

2 Exceptions exist in the form of work done by Drs Janice Crowley, Lyvia Morgan, and Christina Sourvinou-Inwood. J. Crowley in: Transition 203ff.; ead. in: R. Laffineur – L. Basch (eds.), Thalassa. L'Egée préhistorique et la mer, Aegaeum 7, 1991, 219ff.; ead. in: Eikon 23ff. L. Morgan in: L'Iconographie Minoenne 5ff.; Morgan, MWPT 10ff.; ead. in: CMS Beih. 3, 145ff. C. Sourvinou-Inwood, CMS Beih. 3, 241ff. Cf. also K. Krattenmaker in this volume 117ff.

However, if it is argued, as here, that all method is tainted with explicit or implicit intellectual biases on the part of the scholar designing the research project, objectivity in itself cannot be a goal. [3] This must be sought in a combination of context-sensitive principles and the application of reproduceable analytical processes, the aim being to generate a transparent examination, open to scrutiny. For although Archaeology cannot attain the status of a hard science due to its inability to repeat its experiments, pictorial analysis based on clusters mimics to a certain extent experimentational repetition in that each member of the cluster represents a renewed attempt at recreating the master type. [4] Conclusions formulated on the basis of analyses carried out on a cluster population, and valid for all members, approximates scientific explanation.

The requirements for pictorial exegesis, particularly in a domain such as Aegean Bronze Age glyptic imagery, in which description and classification serve as a prelude to the far more contentious purpose of interpreting the images, and thereby writing the book on Minoan-Mycenaean religion, go beyond devising a method, and creating a few analytical tools. [5] Hermeneutics is a package deal. It compels the scholar to design a complete system from the professed aim, through specifying the basic assumptions, down to individual analytical steps.

Any research design is steered by the type of data involved, by past attempts to examine it, and, to a certain extent, by the aims of the scholar. To use the present undertaking as a paradigm: the conviction that the pictorial structure [6] (the system which rules how the various components of the image are organized within the confines of a two-dimensional support), is of paramount importance to any reading of the image directs the scholar to design an analytical procedure which highlights it. Specific or general points of disagreement with the relevant literature guides the design to take these into account. And the type of support, the size of the image, the technique employed, the number of documents, etc. all influence the guiding principles.

Disagreement oft stems from incompatibilities in the framing assumptions, and in the implicit methods applied to the data. Yet any given analysis may very well be irrefutable in

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3 Cf. the critique of the Popperian concept of objectivity in scientific research by P. Feyerabend, Against Method (1988).

4 The master-type is defined as the conceptual image subjacent to the creative acts undertaken by the artist. In the terminology employed by J. Crowley, the master-type corresponds to the 'icon', cf. ead. in: Transition 208ff.; ead., Aegaeum 7, 1991, 224; ead. in: Eikon 23. 25. 32ff.

5 The author is in agreement with I. Pini in: Eikon 11f. 18 (cf. also J. Crowley in: Eikon 36) regarding the need to improve the descriptive language employed in glyptic studies, but cannot accept this activity as the sole priority. It is necessary to proceed with analysis even if later terminological and interpretational corrections ensue.

6 In a paper published in Eikon 181ff., the author employed the term 'pictorial architecture'. 'Pictorial structure' now appears preferable, allowing 'architecture' to be reserved in its primary meaning relative to buildings; cf. K. Krattenmaker in this volume 117ff. The author is grateful to Ms Nina Wedde for spirited opposition to the Eikon usage. Sourvinou-Inwood (supra n. 2) 242. 246 employs 'iconographical schemata' and speaks of the organization of 'iconic space'. Cf. also the suggestion by W. Schiering, Gnomon 50, 1978, 567; id., Gnomon 53, 1981, 579; id. in: Aux origines de l'hellénisme. La Crète et la Grèce. Hommage à Henri van Effenterre (1984), 66 that 'tektonisch' be preferred to 'architektonisch' for motifs such as those illustrated by Yule, ECS Pl. 16 (there termed 'tectonic ornament').

terms of its internally established rules — despite the objections raised by competing explanations. [7] Such clashes of opinion stemming from different approaches to the material, rather than from factual disagreement, can be avoided if the methods applied are detailed. Currently, methodology consists largely of a body of unformulated rules to be distilled from the writings of the masters, a process bound to create clones, not independent scholars. [8]

The present paper attempts to detail aspects of a method believed useful when approaching Aegean Bronze Age glyptic imagery. It renders explicit the framing assumptions recognized as having a bearing on the way the research is designed, discusses the categories created, and illustrates, succinctly, each level within the hierarchy. It cannot constitute a definite statement as the research reported upon is in progress. [9]

CLASSIFICATION AND CLUSTERS

A classificatory scheme depends on the recurrent appearance of comparable images, [10] and on the comparison, and contrast, between different types. Two separate levels of classification exist, the formal and the conceptual. [11] A formal typology unites within a single type, or cluster, images that share a number of primary features, as well as, although not

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[7] To quote an example: the paper by E. Herkenrath, AJA 41, 1937, 411ff., has generally been consigned to the scrap-heap of research. Yet if read on the terms established by its author, to wit, that invocation of the divinity takes place in a squatting, crouching or seated position, the conclusions drawn have a certain logic – despite the discomfort they cause to other scholars. Herkenrath's error lies in the framing assumption: that ethnological comparanda from Cameron, Burma, Celebes, Buddhism, the cult of Isis, etc. are relevant to Minoan ritual practice. His refusal to consider alternative approaches leaves him open to justified criticism.

[8] There exist no textbooks on the methods of Aegean Bronze Age archaeology addressing the specific problems encountered. The teachability, and the standing as a science (however loosely the term is applied) of the discipline suffers, which to some extent explains its status as the orphan of Classical Archaeology (cf. the comments by S. Morris in: Eikon 341).

[9] The paper continues work initiated in the author's to date unpublished doctoral dissertation, Towards a Hermeneutics of Aegean Bronze Age Ship Imagery (Universität Mannheim 1992), and the author's paper in: Eikon 181ff., which covers only one of the aspects treated here, and ought really have been preceded by the present paper – yet, such are the vagaries of research. An attempt to place the work within a global framework, such as those employed by J. Crowley, and C. Sourvinou-Inwood, is eschewed. It appears preferable to commence with questioning the images with the help of some simple concepts suggested by the data themselves. At no point will the literary references be complete. The aim is here to present an approach in the process of genesis, not to survey a sub-discipline of Aegean archaeology. At the origin of the author's interest in structures lies the work of V. Propp (Morphologie du conte, 1970) and the transformational grammar of F. de Saussure (cf. J. Piaget, Le structuralisme [1987]). A spurious pedigree from C. Lévi-Strauss has not been claimed, although his work undoubtedly lies behind it (for a good, critical introduction, cf. W. Burkert, Structure and History in Greek Mythology and Ritual [1979] 1ff.), as does that of J. Derrida behind the deconstruction to be undertaken below.

[10] The following considerations are also valid for objects, although, since the paper focuses on images, no further reference thereto will be made.

[11] These two levels are also subsumed in the contrast between diagnostic and analytical typology. A diagnostic typology is generated from type-specific characteristics, whereas an analytical typology is based on individual-specific traits. The difference, in practical terms, consists in the coarseness (or fineness) of the mesh of the filters employed to constitute the study population.

necessarily, certain secondary traits. [12] This approach to classification is useful in glyptic research when the stone depicts a single object, for example a ship, [13] a quadruped, [14] a Zwei-, Drei- or Vierpass. [15]

Classification by form diminishes in effectivity when confronted with complexe images. Such representations are created by the interplay between the support, the theme, the system governing the pictorial construction, and the constituent components. The support determines the available space, the system how the components required by the theme are organized in that space. A normal typological approach with its emphasis on formal characteristics will encounter problems when faced with the diversity exhibited by the components. [16]

If the images are classified by reference to the superordinate organizing principle — the system, or as it is termed here, the pictorial structure [17] — formal differences are attenuated, and an explosion of potential clusters into individual representations is avoided. [18] The pictorial structure creates a normative framework dictating the position within the picture surface of the specific components constituting the image. Thus it is not the morphology of the individual shapes, but the fact that similar shapes recurrently occupy the same zone on the surface which is deemed significant. The interaction between the occupants of the various zones designate certain zones as favored, that is, of particular semantic interest.

This can be illustrated by reference to the cluster termed by the author "scenes of manifestation". [19] It subsumes the well-known depictions of a divinity appearing as a small floating figure before an adorant. [20] The basic pictorial structure is simple: an adorant to the left, the deity at top center, and a marker of the physical space within which the encounter takes place designating it as sanctified (a shrine, a tree, a pillar, a baetyl) to the right.

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12 A primary feature is defined as a morphological characteristic thought sufficiently significant to warrant attention in the cluster-forming stage – it thus directs the typology to take a certain shape. A secondary trait is an addition to the basic form of the image, an element common to several members of a cluster, but neither universal nor irreplaceable. A third category, incidental additions, have no classificatory significance.

13 Cf. the author's dissertation (supra n. 9).

14 Cf. papers by W. Müller and I. Pini in this volume 151ff. and 193ff.

15 Cf. Yule, ECS Pls. 27–28 motifs 47–49.

16 This may be illustrated by a study of any of the six groups created by W.-D. Niemeier in: CMS Beih. 3, 163ff.: the documents are classified by interactive context: adorants alone, adorants confronted by a deity, deities alone. The members of each group exhibit substantial differences, yet, based on the implicit framing assumptions employed by Niemeier, the typology appears justified.

17 L. Morgan in: CMS Beih. 3, 145 employs a similar concept, "the analysis of structure – iconic identification". It is implicit in Marinatos, MSR 61ff.; cf. also Schiering (supra n. 6 [1984]) 66. Careful study of literature pertaining to Aegean Bronze Age imagery would, no doubt, reveal a more widespread use of this approach, but it has never – to the author's knowledge – been codified within an overall, explicitly argued, system.

18 The present paper, and the work in general by its author, takes it as an irrefutable methodological principle of research into imagery that the single representation has no significance other than as a potential exception until shown to be part of a cluster. This attitude does not ignore the single large-scale, high-quality image, but militates against formulating sweeping, general-purpose statements on its testimony alone.

19 The term 'epiphany scenes', frequently employed by the author in: Eikon 181ff., should, after further thought, better be avoided, as it has certain associations, by virtue of its use in the literature, which the author prefers to reject (cf. ibid. 198ff.).

20 Cf., for example, Niemeier (supra n. 16) 169 Fig. 2,1–6 for the most characteristic examples. The present author in: Eikon (supra n. 9) attempts to further extend this cluster.

Any individual within the cluster adhering to this pattern is termed a canonical image. It respects the master-type to the letter, even if there is morphological variance within the three zones. More substantial differences, such as introducing further adorants, additional cultic paraphernalia, or modifying the form of the floating deity, still warrants a classification, but as a variant, within the cluster — as long as the same general message can be perceived as vehiculed by the image. The crucial characteristics, it is argued, are the floating deity and the focus on either it or activities thought to induce its appearance. Such instances which flagrantly transgress the limits of mutability acceptable to ensure a convincing classification within a single cluster, yet still manifestedly manipulate parts of the message in a syntax reminiscent of the original master type, are classified as marginals. [21]

As previous writings of the present author have considered both the canonical and the variant image, the present paper will concentrate on a discussion of the marginal representation. [22]

DEFINING MARGINALITY

The degree of deviation exhibited by members of a cluster can be gauged by seriation, the linear ordering of images from a chosen starting point. The document which is believed by the scholar to best approximate the master-type — the paradigm case — establishes the basic morphology, and becomes the point of departure for the succession of images ordered according to their ability to reproduce faithfully the intended message. It may also constitute the central point for radiating axes, if it is perceived that the cluster population includes more than one factor of variability.

At this stage in the present methodological exposition, the comments against objectivity made in the introduction find their full justification: the paradigm case, and the factors of variability chosen by the scholar depend on his/her conception of the material. The design of the research project cannot be objectivized beyond reach of individual sensitivities and biases. In speaking of 'context-sensitive principles', it is necessary to admit that the context is not only given by the particular problem treated, but also by the identity of the beholder. Despite this obvious deviation from objective research design, purely subjective results seeking to prove a point at all cost are avoided by the inherent checks against manipulation of data: peer review attentive to special pleading, abuse of evidence, skewed research design in favor of preconceived notions. By specifying the framing assumptions, the scholar not only makes

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21 In the terminology of L. Morgan (CMS Beih. 3, 145), the marginal corresponds roughly to the 'ambiguous image', being "in structural terms, the synthesis of several units of which the resultant image is susceptible to multiple or conflicting interpretation." In the 'scenes of manifestation' (cf. the author in: Eikon 194ff.), the 'Ramp House' ring (ibid. Pl. XLVII,13) represents such a marginal as it combines characteristics of both the 'scenes of adoration' and the 'scenes of manifestation' (ibid. 190f.). Now add also Niemeier (supra n. 16) 173 Fig. 4,15 as a marginal scene of adoration. It should be noted that the notion of 'marginal' does not cover the range of ambiguity postulated by Morgan, nor the all-pervading ambiguity of E. Gombrich, Art and Illusion (1977), passim.

22 Cf. the dissertation and the author in: Eikon 181ff.

public the theoretical foundations of a research project, but also establishes the rules within which he/she is obliged to work. [23]

A cluster, if schematically rendered, contains a number of documents hovering around the paradigm case in positions determined according to the degree of deviations from the perceived master-type. At some point, the edge of the cluster will become apparent, the moment when classifying an individual image in the cluster under study is no longer viable: the formal and/or structural deviation has reached such proportions as to raise questions regarding the criteria employed by the classificatory scheme. The image has approached the marginal zone, the no-man's land at the very edge of and between clusters. Thus, the marginal image need not only be the outcast of one cluster, it can also herald the outer edge of another.

Fig. 1 CMS IX No. 61.

Fig. 2 CMS XII No. 277.

Fig. 3 CMS II,3 No. 4.

A seriation of birds with deployed wings illustrates the concept of marginality: [24] the structure of the image, the vertical body tapering into a beak at the upper end, spreading into a fan-shaped tail at the other, with, left and right, the V- or L-shaped wings, points orientated downwards, is not exclusive to the bird. It also appears in the bird-woman cluster *(Figs. 1—3)*. The seriation of birds with deployed wings and bird-women creates a linear regression from the chosen starting point, a bird, via several subtle transformations, to the

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23 For a different approach to specifying the role of the beholder, cf. Sourvinou-Inwood (supra n. 2). It remains unclear why the framework constructed from an argument based on perception and right/left dichotomies in primitive thought imposes the readings suggested by Sourvinou-Inwood. It is to be hoped that her eagerly awaited Reading Dumb Images: A Methodology for Minoan Religion and Iconography (cf. op. cit. 241 n. 1) will clarify this matter.

24 The following seriations serve to illustrate the concepts of canonical, variant, and marginal images. They constitute arbitrary choices of individual images without reference to possible chronological inversions. They are in no way canonized by the virtue of the choices made by the author. L. Morgan (CMS Beih. 3, 152) speaks of a 'metamorphic process', recognizing the chronological difficulty. Conceptually related to ambiguity and marginality is the polysemy of signs, cf. Sourvinou-Inwood (supra n. 2) 243.

canonical bird-woman. Marginality enters when it is no longer possible to determine whether a bird or a bird-woman is depicted. [25]

A second example involves the transition from the naturalistic image of a griffin to a griffin which clearly combines a decapitated leonine body and a bird protome with one or two deployed wings. [26] The marginality in this instance is not one of transgressing the formal limits for depicting a griffin, but rather one of clusteral overlap: the creature clearly employs complete elements from another cluster, yet remains fully identifiable.

This introduces a second use of this clustering process, beyond that as a purely classificatory tool. It may also serve as an interpretative aid to read enigmatic images. A representation which does not clearly enunciate its message attains no more than imperfect transmission. [27] Yet when placed in a cluster of partially cognate documents, the missing signals may be reconstructed, and the image read. Some of the Zakro Master's work illustrates this, particularly his bird women. Among the 14 sealings belonging to this cluster, [28] several would not, it is claimed here, be read correctly without reference to the more obvious depictions. A seriation departing from the most trenchant image attaches the variants and the marginals to the canonical members. [29]

The paradigm case is deconstructed by the beholder into its constituent parts, with due notice taken of the position occupied by each element within the structure of the image. By comparing the occupants of various zones, it is possible not only to specify what can, on the basis of the available data, be expected in a given zone, but also to recognize stunted images lacking a zone, or nominally 'incorrectly' reconstructed instances, caused, for example, by inversion or displacement/duplication of zones. [30]

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25 One choice of images could include the following, moving in the direction indicated in the text: CMS IX No. 61; XII Nos. 254. 277; II,4 No. 176; II,3 No. 4. The margin would be drawn left or right of CMS XII No. 277 – somewhere here one senses that a new cluster has begun. The bird-woman CMS II,3 No. 4, in turn, may constitute the departure of another seriation leading to the bare-breasted frontal woman in the cult scenes (e.g. CMS I No. 126, via II,4 No. 136; the skirt on CMS II,3 No. 170 is particularly reminiscent of that of the birdwoman CMS II,3 No. 4), or continues into Z20 and the Zakro Master bird woman abstractions (cf. infra n. 29).

26 A suggested seriation: CMS I No. 271; II,4 No. 116; V Nos. 438. 437. 590. The seals Kenna, CS, K223 and CMS X No. 318 indicate the relatedness to canonical bird images.

27 The receptor is the modern beholder: whether a Minoan beholder faced similar problems is not a topic open for debate, thus restricting the range which ambiguity can take as a concept in research.

28 The following sealings are here considered as belonging to the Zakro Master bird-woman cluster: Z 20, Z 21, Z 23–29, Z 33, Z 43–45, possibly Z 53. The winged, goat-headed creatures (Z 34–38) are not included. On the Zakro Master, cf. D.G. Hogarth, JHS 22, 1902, 76ff. Pls. VII–X, and, particularly, Weingarten, Zakro Master; also I. Pini, AA 1983, 559ff.

29 Such a seriation could start with Z 20, and proceed via Z 21, Z 25, and Z 28 to Z 45.

30 The sealing Z 45, for instance, displays a duplication and inversion of the bottom zone. By comparison with Z 20, the skirt and the lower extremities are expected: naked legs appear bent in a manner to simulate the shape of the skirt. Sealings such as Z 25 and Z 28 indicate that an alternative notation for this zone is the fan-tail. This element appears in the top zone of Z 45 – therefore the contents of the bottom zone are here duplicated and displaced. Curiously, A. Onassoglou, in discussion to L. Morgan in: CMS Beih. 3, repudiates the notion that "Einzelfälle in Gruppierungen eingeordnet werden, um sie dort zu bestimmen." This would imply an ability to read any image in a vacuum, without the benefit of more decisively rendered typological comparanda.

Depending upon the complexity of the image structure, and the degree of transformation displayed by certain real or potential members of the cluster, the degree of deconstruction will vary. In examining the bird-to-bird-woman seriation and the griffin-cluster cited above, the deconstructional level is low since it concerns almost complete components. Working with the Zakro Master's bird-women requires a greater degree of deconstruction: it is the recognition that similar parts are combined in an analogous manner which allows the seriation to be undertaken, and thereby the classification to proceed. [31]

DECONSTRUCTING 'TALISMANIC' IMAGES

In a seminal paper published in 1985, L. Morgan proposed disassembling 'talismanic' images into the "smallest definable iconographic unit" in view of "a study of unit variables". She noted that a change in reading is caused by "only minor differentiations between the units and their distribution". [32] Morgan employed a content-orientated procedure. Yet 'talismanic' images are determined to a greater extent by technique than by content. [33] A more complete deconstruction, to the level of the creative acts of the cutter, that is, to the types and numbers of cuts necessary to complete the picture, appears of greater use.

This approach would isolate wide ditch-like cuts with a thick stone, thin lines of various lengths with a thin stone, and circular and semi-circular cuts with the tubular drill. By ordering the cuts according to position and association as they appear in, for example, the ship images, it becomes clear that the ditch-like cuts are reserved for the hull, and occasionally used for the ikrion uprights, the cuts with the tubular drill are employed for the lunettes of the ikrion and for waves, and, finally, that all other elements are cut as thin lines. [34]

The position within the pictorial structure reveals that alternative notations are acceptable. All 'talismanic' ships are to be classified in a single cluster, with the option of subdividing it into three larger groups and 15 subgroups according to the cuts and articulations employed by the artist. A canonical 'talismanic' ship image depicts the forrard section of a hull with a keelline below, oars, a bird-symbol at the bow, and an ikrion with two forestays running to

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31 The processes of seriation and deconstruction are tools developed by the beholder in his/her work with the documents. They imply nothing concerning the thought-patterns of the artist, for instance the Zakro Master, when transforming the cuts normally used in one context into new images. The original thought-patterns cannot be recreated beyond hypotheses – in their stead must come transparent accounts of the scholar's work with the data.

32 L. Morgan in: L'Iconographie Minoenne 10f. I. Pini (supra n. 5) 15f. characterizes Morgan's units as "meaningless for any understanding of these motifs".

33 Morgan (supra n. 2) 11 notes, nonetheless, that "the form of glyptic units is often largely technically determined" (cf. also the literature cited by Morgan in her n. 12). In CMS Beih. 3, 152, Morgan employs the term 'unit' for "the circles, crescents, lines etc.", which could suggest a deconstruction which goes further than that illustrated in Fig. 2b of her paper in L'Iconographie Minoenne. If this is so, then the process would be identical to that advocated here.

34 Onassoglou, DtS 31. 171ff., esp. 173 Fig. 3.

the stempost. The ikrion consists of three uprights joined at their summits by two lunettes, and of cross-hatching. Occasionally waves may be added below the vessel.

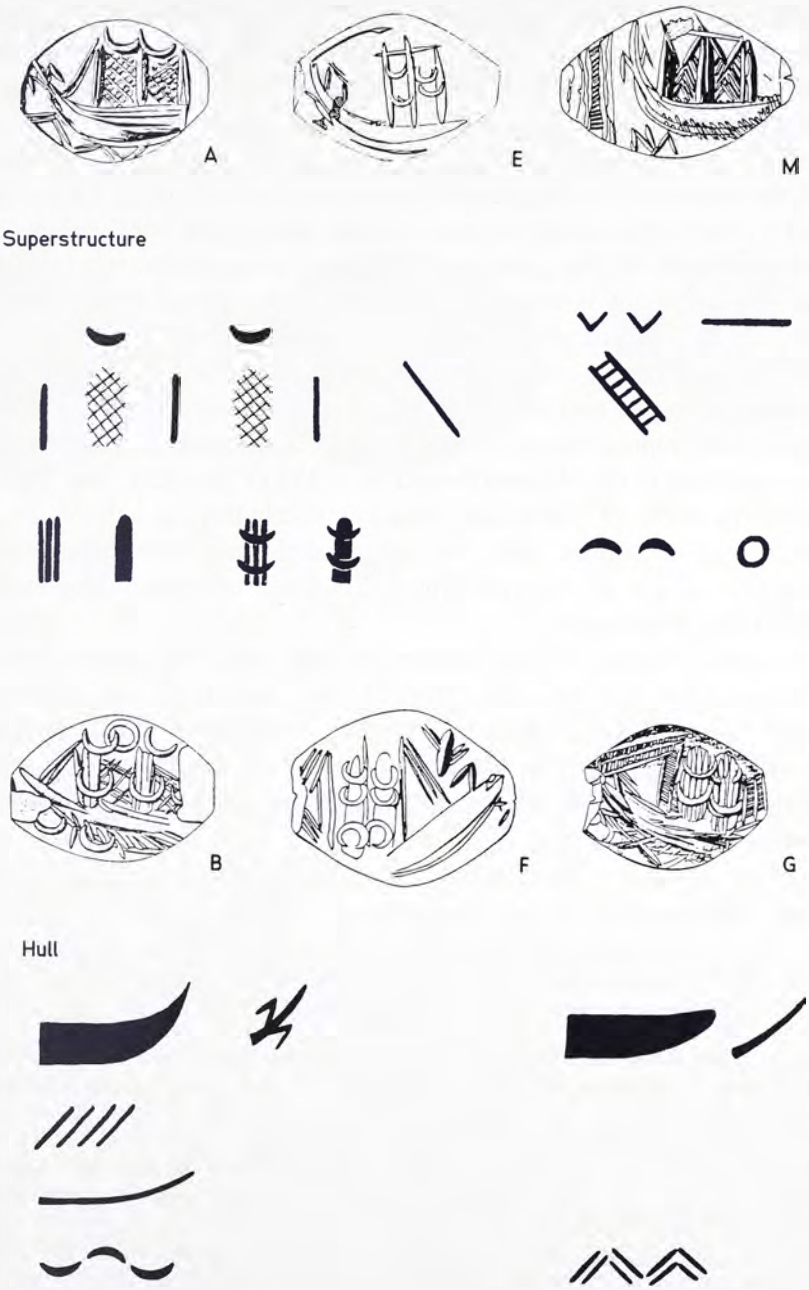

Fig. 4

The three groups are generated by a simple presence/absence matrix *(Fig. 4)*: the ikrion either is rendered with lunettes and cross-hatching, or with the one or the other. The subgroups depend on points of detail, such as the size of the uprights, whether they are cut with single lines, or multiple, or rendered by bundles of parallel vertical cuts; other details include additional lunettes and their position and orientation within the image. [35] The result of this analysis is to establish that it is a single object, an ikrion, which is depicted, and not sometimes a cabin, sometimes a sail, sometimes deckcargo. [36]

To return to the concept of marginality: to this point the assembly of cuts undertaken by the artist, and the reassembly subsequent to deconstruction undertaken by the beholder, has been controlled by rules of syntax. Canonical images, and a number of variants have ensued. Although not the purpose of this paper to digress into a consideration of the much-abused concept of 'artist's error', it is necessary to consider the effects of an 'uncontrolled' or 'incorrect' assembly by the gemcutter of the parts of speech in his artistic vocabulary.

The beholder recognizes the image as that of a ship by virtue of expected parts appearing in expected positions on the surface of the seal. Unexpected cuts will confuse the signals believed emitted by the representation, and render its classification more difficult. The image on the jasper amygdaloid in the Metaxas Collection, CMS IV No. 220 *(Fig. 5)*, may serve as a paradigm case: in terms of 'talismanic' nautical vocabulary, a hull of the low type is depicted, with a keelline, three oars, vertical parallel lines with lunettes, all elements correctly placed according to the relevant syntax. Yet these 'talismanic' glosses do not suffice to create a 'talismanic' ship image. [37]

Apparent truncated images of ships appear on two seals, the steatite from the Mavro Spileio nekropolis, CMS II,4 No. 128 *(Fig. 6)*, and side b of the Brauron carnelian, CMS V,1 No. 213 *(Fig. 7)*. On the former, the lower edge appears to have a fringe of 'oars', and a very imperfectly rendered ikrion. [38] The latter suggests a magnified section of the 'talismanic' ship on side a: cross-hatching between two multiple uprights, and to the right, a grotesquely swelled bird symbol. [39]

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35 The analysis of cuttlefish by L. Morgan in: CMS Beih. 3, 153ff. Figs. 13–14 illustrates similar aspects of 'talismanic' images construction. Further 'talismanic' motifs can be expected to behave in a related manner.

36 As already recognized by Onassoglou, DtS 32. For a detailed analysis of the 'talismanic' ships, cf. the author's dissertation, cited supra n. 9.

37 Onassoglou, DtS 289 Is-21 and Pl. LXIV,21 classifies this individual as an 'isoliertes Motiv'. CMS IV No. 220 describes it non-committedly as "three truncated panels rest upon a base; talismanic hatching in the field; terminal lines at each end." The main griefs are: absence of the bird symbol at the bow, the presence of the central inverted lunette and vertical lines unit, and the attempt at symmetry evident in the short cuts left and right of the 'hull'. CMS XIII No. 73 duplicates the phenomenon but in different terms: loglike hull, keelline, oars, zigzag waves, uprights, even the line which occasionally borders the ikrion uprights, and cross-hatching. It is not a ship; Onassoglou classifies it as a 'Spross' (223 SP-7 and Pl. XIV,7).

38 It can be compared with the 'talismanic' ship on a carnelian in Copenhagen, CMS XI No. 237c.

39 For a related instance of parts of the ship being lost over the edge of the stone, cf. the agate in the Cabinet des Médailles, CMS IX No. 88c. Cf. Schiering (supra n. 6 [1984]) 66 n. 4; 70. This approach suggests a type of pars pro toto; cf. Chr. Boulotis in: 1st International Symposium on Ship Construction in Antiquity, H. Tzalas (ed.), Tropis I, Piraeus 1985 (1989) 57.

The cited representations retain a tenuous link with the 'talismanic' ship cluster through an apparent duplication of certain canonical features, but in contexts which prohibit an inclusion in a catalogue of Aegean Bronze Age ship images. Other seals depict objects or compositions with more remote connections to the ships, occasionally a mere echo. The log-like hull with oars, and, less frequently, the keelline, function as a base for the KANNE, the SPROSS, and other motives, but do not invite a reading as a ship. [40] Cuts very similar to those employed for the uprights of the ikrion appear in wholly different contexts, yet clearly indicate a technical parentage.

Fig. 5 CMS IV No. 220.

Fig. 6 CMS II,4 No. 128.

Fig. 7 CMS V,1 No. 213.

Four seals will be passed on review. A schist seal in the Hutchinson Collection, CMS VIII No. 122, combines an attenuated logshape base, cross-hatching, concentric circles, all elements known from the ships, but in a manner totally removed from any identified motif. [41] The BÜNDEL IN V-FORM CMS XII No. 177 *(Fig. 8)* illustrates substantial links to the ship — log-like hull, keelline, oars, two bundles united at the summit by an inverted lunette, cross-hatching between them, plus additional branch motives left and right — yet the classification cannot be doubted.

Intriguingly similar to the ikrion is the SPROSS CMS XII No. 186b *(Fig. 9)*: although the 'uprights' radiate from the lower edge, they exhibit a number of features known from the ships, such as the line parallel to the upright, the cross-hatching, and, most significantly, the double zigzag lines joining the summits. [42] Finally, the combination KANNE+SPROSS on

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40 Cf. Onassoglou, DtS, KA: Pls. VI,32; VIII,74 (cross-hatching below log); IX,KO-6; SP: Pls. XIV,5 (cross-hatching below log). 6.11.13.16 (no 'oars', but with 'keelline') .17.18; XV,23–25 (cross-hatching below log) etc.; XVI,KO-11; KR: Pl. XXVIII,1 (log only); BU: Pl. XLV,17; WZ: Pl. XLVII,20 (cross-hatching below log).

41 Not catalogued by Onassoglou, DtS.

42 Line parallel to upright: CMS I Suppl. No. 74; IV No. 227; V Suppl. 1A No. 191; X Nos. 110b. 276. Cross-hatching: CMS VII No. 104; VIII No. 139; IX No. 116; XI No. 20b. Double zigzag joining uprights: CMS IV No. 227; V Suppl. 1A No. 334; X No. 99.

CMS IV No. 243 stands on a stunted hull-and-oars base, and includes a cross-hatched background. It is clear that the image is far removed from the ship cluster, but it illustrates the use of simple technical means to create superficially or partially similar images. These documents cannot be considered marginal to the ship cluster, yet there is a manifest technical overlap, and little would be needed for any one individual to slip into marginality.

Fig. 8 CMS XII No. 177.

Fig. 9 CMS XII No. 186b.

A final instance may be quoted due to its interesting double marginality: the three uprights with lunettes depicted on CMS IX No. 99, classified as an "isoliertes Motiv", [43] vaguely ressemble less tidy depictions of 'talismanic' ikria without the cross-hatching, [44] yet could also be considered as marginal to the OKTOPUS motif. [45]

The sharing of cuts determine the choice of employing them, rather than a "smallest definable unit", as diagnostic traits when working with 'talismanic' images. A greater scope for identifying parallels ensues, particularly when the position of the cuts is taken into account. [46]

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43 Onassoglou, DtS, 291 Pl. LXV,44.

44 Cf. CMS I Suppl. No. 125; II,3 Nos. 157. 182; XI No. 125.

45 Cf. Onassoglou, DtS Pl. XXVII,8–12 (note, however, that the lunettes are always arranged to either side of the upright).

46 Related phenomena can be observed in the use of simple shapes as building blocks in image construction on early Cretan seals; e.g. the hatched segment of a circle for human figures: Yule, ECS Pl. 2,38; for birds: ibid.: Pl. 9,14; CMS II,1 No. 414; IX No. 17d; XII No. 45c; the petaloid loop for human figures and a cat: C.G. Thomas in: Eikon 218 and Pl. LIId, from G. Walberg, Tradition and Innovation, Essays in Minoan Art (1986), 32 Figs. 37–38 (= Yule, ECS, Pl. 32,15.24) and 18 Fig. 13; for a net with fish: Walberg, op.cit. 18 Fig. 12; for Zweipässe: Yule, ECS, Pl. 27,1.3. On the use of formulae, cf. Walberg, op.cit. 11, Thomas op.cit. passim, and J. Crowley in: Transition 211.

CONCLUSIONS: RESEARCH DESIGN AND ARCHAEOLOGICAL DISCOURSE

The work of the archaeologist examining pictorial data consists of two complementary operations, the ordering of the documents, and the creation of a discourse, serving both to justify the classification employed, and to interpret the evidence in accordance with the methods applied. Both are, objectively considered, flawed, since they are tributary to the particular scholar: archaeological interpretation does not create facts, only opinions. The integrity of the opinions depends on the theoretical framework within which the study is undertaken.

Given the nature of pictorial data, clusters (or 'groups' or 'types' or related terms) constitute the only valid basis for formulating general statements. No matter how artfully created, a single document with no parallels cannot be hailed as major evidence due to its possible status as an exception. The cluster approach is the closest pictures can come to statistics and quantification.

The creation of discourse by the archaeologist generates texts, to be examined as such. This entails explicit enumeration of the elements considered necessary and/or sufficient for the inclusion of individual documents in a cluster, as well as of their consequences for the continuing investigation. [47] One such consequence of clustering allied with pictorial structure when examining complexe images is the recognition that the cluster population contains documents which adhere closely to the master-type, the canonicals, others which deviate slightly, the variants, and some which deviate considerably, the marginals.

The margin, as was noted above, is drawn by the beholder. [48] It need not have meant anything to the artists creating the objects. The beholder is conditioned by the perception of an apparent matrix within which the documents appear to have been created. This matrix-orientated thinking is a product of the typological classification which has dominated Archaeology since its inception. Marginality is, thus, an externally imposed analytical concept which tries to account for such individuals which do not duplicate a canonical image or any of its variants, yet appear to invoke their essence.

Marginals are borderline cases to the classificatory and interpretative act imposed upon the archaeological data. They do not enter into the defined categories by virtue of their inability

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[47] The author's paper in: Eikon (supra n. 9) constitutes a sustained attempt to apply pictorial structure in general, and a specific structure in particular, to a well-known category of evidence. A number of consequences emerging from inclusions in the cluster obliges the study to examine further candidates, and the discourse to continue elsewhere. It cannot be ignored that the approach creates problems, not all solved in the paper in question. This, however, is considered preferable to choosing a cut-off point in respect of past opinions emitted concerning the relevant material.

[48] 'Talismanic' ship formulae (bird symbols, lunettes) are also employed on the so-called 'trees in the wind' (J. Betts, AJA 72, 1968, Pl. 61,1–3; most recently discussed by J. Weingarten, SMEA 28, 1990, 98. 103 and 103 n. 30), suggesting a reading as three superimposed bows but thereby creating images radically marginal to the 'talismanic' ship cluster. Whether the artist attempted to create an image familiar to his contemporaries or a wholly new artistic vision lies outside the scholar's ability to judge. The beholder can only proceed from the known (the components) to the unknown (the message) and place the image in the periphery of his/her classification.

to fully respect the criteria suggested by the cluster population as valid for inclusion. The term 'ambiguity', if the onus is placed on the beholder, corresponds to the state of marginality: time has removed the code, and the scholar manages, by creating an analytical matrix from the aggregate of signals emitted by those individuals which can be confidently clustered, to recreate only part of it — or something believed to approximate the original code. [49]

Marginality — even more than clustering, seriation, and deconstruction — places the scholar at the burning point. The margin drawn is tributary to the framework within which the investigation is undertaken. Since there is a margin, or border, to each cluster, any attempt at classification must face the problem of fluctuating marginality. In other words, classification is variable, and the results — the discourse — cannot attain more than a status of justified belief, where the justification is dependent on the theoretical and methodological solidity of the explicitly formulated framework.

Therefore, if this paper closes with a call for a theory-based approach to Aegean Bronze Age imagery, it is not merely an attempt to encourage scholars to develop new methods of analysis. It is a demand for global systems which specify framing assumptions, define terminology, create analytical tools, and, above all, particularize the role of the scholar in the hermeneutic process.

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49 The frequent reference to Morgan's paper on ambiguity (in: CMS Beih. 3, 145ff.) should make it clear that the present author does not agree with the criticism leveled against it by Onassoglou (in this volume). The concept of marginality as argued here postulates 'ambiguities', particularly in the 'talismanic' image structure, resolved only through an explicit (or implicit) de- and reconstruction. The approach of Morgan is a valid attempt to go further in the understanding of individual 'talismanic' representations, employing as a base the fine typological study which Onassoglou, DtS is.

SEALING STUDIES IN THE MIDDLE BRONZE AGE, III: THE MINOAN HIEROGLYPHIC DEPOSITS AT MALLIA AND KNOSSOS

JUDITH WEINGARTEN

INTRODUCTION

This paper sets out to explore the Hieroglyphic administrative system especially as it relates to the use of hieroglyphic seals. In order to set the stage, let me remind you of what a contemporary non-hieroglyphic deposit looks like, that is, the sealings and written documents found in Room 25 at the Palace of Phaistos. This massive deposit of over 6,500 sealings, stamped by 327 different seals, plus a scatter of written documents, was sealed in the ruins of the third phase of the First Palace. [1] Enrica Fiandra was able to make a detailed analysis of 1544 of the best preserved of the sealings. [2] She discovered that about 10% had secured various kinds of identifiable goods, such as jars or rush matting, while about 90% had sealed either flaring wooden pommels or small wooden cylindrical pegs; pommels and pegs were identified as having sealed doors, boxes or chests.

Since, obviously, neither doors nor very large chests can be considered moveable goods those seal-owners who had sealed the pegs and large pommels must have been resident in the palace. This seems to be confirmed by the highly-intensive pattern of seal-use, that is, relatively few seals were responsible for a disproportionately large number of sealings: just 44 of the 327 seal-owners — 13% of seal-owners — accounted for 70% of all sealings, a kind

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* Parts I and II of these Sealing Studies are to be found in P. Ferioli et. al. (eds.), Archives before Writing (1994) 261ff.

I would like to thank Dr. J.-P. Olivier for having so generously allowed me to see his transcriptions of Knossos hieroglyphic documents before publication in CHIC.

NB: in *Figs. 4–7*, all hieroglyphic texts are normalized and no attempt is made to reproduce their physical appearance; texts are written from left to right unless an initial 'x' indicates otherwise. Drawings of non-hieroglyphic seals are meant solely as *aides-mémoire* and are neither accurate reproductions nor to scale.

[1] Stratigraphy defined in E. Fiandra, KretChron 15/16, 1963, 118ff.; MM IIB dating: P.M. Warren – V. Hankey, Aegean Bronze Age Chronology (1989) 47ff. 131ff. 169. Their seal-types, almost all engraved with geometric or early naturalistic designs (with one possible exception [infra, n. 10]) are discussed in Weingarten, Sealing Studies II, 282ff.

[2] E. Fiandra, Pepragmena 2, 383ff.

of concentrated sealing authority best explained by resident seal-owners repeatedly sealing and unsealing on-the-spot (Weingarten, SSMC I, 13).

In the sealing deposit was also a surprisingly heterogeneous lot of written documents: seven two-sided bars, four tablets, a mini-tablet, two irregular shapes, some fragments, and four or five roundels. [3] Some tablets were clearly written in proto-Linear A but the script on the bars is more problematic; originally published as hieroglyphics, these have since reappeared in the corpus of Linear A inscriptions. [4] While it would certainly be neater to have a single script in use at any one time at Phaistos, the uncertainty is in itself instructive: clearly, two scribal traditions were at work in the Palace. [5] Although we cannot read any of the texts, we can follow the gist through their ideograms, some of which continued with little change into deciphered Linear B: these refer to MEN, VASES, WINE?, FIGS and GRAIN (PH 8b.2; 12a; 14a; 15a; 7b.3?), sufficiently diverse concerns to prove a developed scribal administration of goods and personnel.

Room 25 also contained a few noduli, those 'sealings that do not seal', perhaps dockets of some sort, [6] and also the first roundels. Roundels have been convincingly interpreted as receipts, the recipient of goods acknowledging units of 'debt' by marking the edge of the roundel with the equivalent number of seal impressions. [7] The early roundels from Room 25 refer by ideogram to WINE (Wc 42, 43) and possibly SHEEP (Wc 44), but they lack the indispensable seal impressions; however, canonical roundels quickly appear elsewhere in the palace, and these are stamped by one or even two different seal impressions. [8]

When Erik Hallager presented his definitive study of roundels in ASSA, this respondent noted that 'roundels are, strangely enough, our closest approach to the sealed written documents known from the Near East'. I now wish to modify that statement: roundels are not just close to sealed written documents, they *are* sealed written documents, but they are documents written for a functionally illiterate bureaucracy. [9]

For if I were to codify the rules of bureaucracy, surely the very first rule would be: 'Never sign a blank cheque'. When the Minoan seal-owner signed with his seal for palatial property, he must have known what he had put his seal to: the preservation of his ears, nose and perhaps his life depended on it. That is why, on roundels, each seal impression equals one unit — so the scribe cannot cheat the seal-owner regarding numbers — and that is why, too, the vast majority of roundels are inscribed with simple ideograms, which even the barely

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3 G. Pugliese Carratelli, ASAtene 35/36, 1957/58, 363ff.; see Weingarten, Sealing Studies II, 276ff., for further discussion of these texts.

4 Hieroglyphics: Carratelli (supra n. 3) 363ff.; Linear A: GORILA I, PH 7–28.

5 Doubts have again been raised by the publication of a Phaistos MM IIB vase inscription which is clearly hieroglyphic: P. Militello, Sileno 16, 1990: Frammento B.

6 J. Weingarten, Kadmos 25, 1986, 1ff.; addenda: ead., Kadmos 26, 1987, 38ff.; Kadmos 29, 1990, 16ff.

7 E. Hallager in: ASSA 121ff.

8 The development of roundels at Phaistos is discussed in Weingarten, Sealing Studies II, 276ff.

9 Response to E. Hallager in: ASSA 143f. If functional literacy is 'the ability confidently to understand and use the written word in one's job' (E. Bolton in: Financial Times, 19/10/91), functional illiteracy would describe as much a lack of confidence as an absolute inability.

literate could understand. It is a simple system which allows the functionally illiterate to transact palatial business with confidence.

THE HIEROGLYPHIC DEPOSITS

With these remarks in mind, we turn to the Hieroglyphic Deposits of north central Crete where a dramatically different picture confronts us. What I find most intriguing about these deposits is not just the use of a hieroglyphic script at Knossos and at Mallia, less than 60 kilometres away from the proto-Linear A of Phaistos, [10] though that is striking enough, but rather that, for the first and only time in Minoan history, seals inscribed with written texts were in common use: almost half of the seals impressed at Knossos and Quartier Mu were engraved with hieroglyphic inscriptions while another 15% had single signs which also appear in the hieroglyphic script (though whether these were intended to be read is most uncertain). Why does the use of inscribed seals correlate almost exactly with – and only with – the use of the hieroglyphic script? Why were these seals not 'translated' into Linear A? Who used the hieroglyphic seals and why? It has often been asserted that they were official seals, whereas gems with ornamental or naturalistic designs belonged to individuals who stamped on their own behalf. The evidence from Mallia, to start with, does not entirely support this common view.

Mallia: Quartier Mu

Twenty-four (uninscribed) sealed documents plus three hieroglyphic bars and 12 medallions were found in Building A, the main administrative complex at MM IIB Quartier Mu. [11] Three bars and 12 medallions might be considered an unassuming scribal effort, were it not that one of the bars, MALLIA 6, records 7,000 units of some property; this is the largest single number recorded on hieroglyphic texts. [12] Obviously, an administration dealing with such a quantity (of whatever it may be) must have been more extensive than the surviving records suggest. Likewise, the twelve medallions, inscribed with short two- to four-sign inscriptions, also hint at a slightly greater scribal potential since they were probably

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[10] The contemporaneity of the hieroglyphic and linear scripts was (I think rightly) restated by W.C. Brice, Kadmos 29, 1990, 5; pace Pini in: ASSA 45f. The geographic distribution of hieroglyphic sealstones is also quite telling: despite the easy portability of seals, neither hieroglyphic seals nor their impressions (with but one possible exception at Phaistos) are found outside of eastern and north-central Crete in MM II/III. The exception which may prove the rule is CMS II,5 No. 239, perhaps intended as an inscription; see CHIC.

[11] a) J.-Cl. Poursat – L. Godart – J.-P. Olivier, Le Quartier Mu I, EtCrét XXIII (1978) 11ff.; b) B. Detournay – J.-Cl. Poursat – F. Vandenabeele, Le Quartier Mu II, EtCrét XXVI (1980) 192ff.; c) J.-Cl. Poursat in: ASSA 25ff.

[12] J.-P. Olivier in: Pepragmena 6, 69ff.

Cat. No.	Mu No.	Type	Room	Seal Impression
261	R3	Nodulus	3	
267+268	R7	Noduli	3	
269	R33	Nodulus	3	
262	R13	Nodulus	9	
281	R15	Peg	9	
282	R16	Peg	11	
271	R14	Nodulus	D/E	
263	R31	Nodulus	17	
270	R10	Nodulus	17	
272	R17	Nodulus	17	

Fig. 1.1 Mallia Quartier Mu. Sealings and Noduli from Building A (not to scale; from Mu II)

Cat. No.	Mu No.	Type	Room	Seal Impression
273	R5	Nodulus	17	
284	R26	Pommel(?)	16/17	
285	R22	Pommel(?)	16/17	
283	R12	Pommel	16	
277+278+279	R11	Crescents	16	
276	R30+R11	Crescent	16	
275	R30	Crescent	14	
264	R34	Nodulus	14	
265	R19	Nodulus	14	
266	R4	Nodulus	14	

Fig. 1.2 Mallia Quartier Mu. Sealings and Noduli from Building A (not to scale; from Mu II)

written by two or three different hands. [13] We must imagine at least three or four individual scribes working in Building A.

Almost half of the 24 sealed documents *(Fig. 1)* were stamped by hieroglyphic seals and half by purely geometric designs ... with a single naturalistic gem impression as the inevitable exception. Their supports varied: five pommel or peg sealings (of types known from Phaistos), five of the new crescent-shaped sealings, and 14 noduli, those 'sealings that do not seal', presumably a form of mini-document. Two of the peg sealings had secured cylindrical pegs of a type which almost certainly functioned as door-locks. [14] This means that we can pinpoint two seal-owners who were doorkeepers, a role of some importance in an archive or storeroom complex: after all, he who locks the door is ultimately responsible for all the goods or records within (to us, it is a modest clay sealing; to them, the key to their stored wealth); so it follows that the seals which closed the doors in Building A belonged to persons having some official status, probably of high rank within the administrative hierarchy. Neither door-sealing is stamped by a hieroglyphic seal. Rather, it is of some interest to discover that both sealings — though found nowhere near each other — were stamped by similar geometric designs, two variations on the theme of rotating S-spirals *(Fig. 1: R 15, 16)*. [15] Thus, the two doorkeepers (for so we may call them), the only identifiable resident officials of Building A, both carried seals with similar geometric designs, not hieroglyphic seals.

Fig. 2a.b Crescent Sealing Partners (R 11 + R 30): Building A, Quartier Mu, Mallia.

There was also an intact sealing of a pommel type which could have secured either a chest or a door. It is a pity we cannot be sure of its function because this sealing was indeed stamped by a hieroglyphic prism (R 12). In the room with this pommel-sealing were also found four crescent sealings, each stamped by another prism *(Fig. 2a: R 11)*, possibly a

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13 Poursat – Godart – Olivier (supra n. 11a) 56.

14 For a good description of how these pegs functioned, see A. Malamat in: K.R. Veenhof (ed.), Cuneiform Archives and Libraries (1986) 160ff.

15 Two similar S-spiral seal impressions (R 13, R 14) on noduli were in the same area as R 15, in and near Room 9 (cf.: CMS IV No. 140, another nodulus 'from Mallia', with a seal impression almost identical to R 13).

second facet of R 12. [16] Whether or not this was the case, it is noteworthy that all documents in Room 16 had been stamped by hieroglyphic seals. Are we to imagine R 11+R 12 as the resident official in charge of the goods once stored above Room 16? That would be altogether too simple for Minoan bureaucracy: for one of the crescents in Room 16 had also been stamped by a second seal, a naturalistic gem depicting a rather primitive animal hunt scene *(Fig. 2b: R 30)*. This naturalistic gem-owner had, in turn, sealed another crescent, quite by himself this time, found some distance away in Room 14. This at least clarifies two points: first, since both seal-owners must have stamped their joint crescent while its clay was still wet, the parsimonious explanation is that they were both in residence at that time; second, the fact that the owner of the naturalistic seal had also stamped a crescent by himself, quite independently, means that he was as competent to act on his own as was the prism. In so far as the sealing record can tell us, he conducted precisely the same business as the prism, albeit a little less frequently.

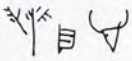
Noduli: Seal Impressions

267+268

261

269

Medallions: Inscriptions



8

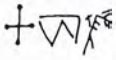
12

18

19

14

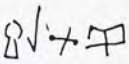
15



9

16

17



10

11

13

Fig. 3 Mallia Quartier Mu. Noduli and Medallions from Building A/Room 3

[16] J.-Cl. Poursat (supra n. 11b) 222; stamping with different facets for different tasks (supra n. 11c) 28. However, there appear to be slight differences in dimensions (supra n. 11a) 86f.: R 11 = 1.70 x 0.55 cm; R 12 = 1.50 x 0.60 cm.

Nonetheless, there is a hint that certain tasks may have been reserved for hieroglyphic seals or at least for seals with signs from the Hieroglyphic script. All twelve medallions in Building A were found together with four noduli within the same square meter in Room 3 *(Fig. 3)*, an unexpected association of documents. Each gem stamped on the noduli depicts one or more animal heads (calf or possibly dog, ox, goat); similar signs were written, generally at the start or end of inscriptions, on six of the twelve medallions. [17] This is rather an accumulation of signs representing the same category of objects and an ideogrammatic interpretation quite naturally springs to mind. If this is justified, it would establish a meaningful relationship between the texts on the seals and the texts on the medallions.

The Knossos Hieroglyphic Deposit

Unlike the finds from Quartier Mu, the Hieroglyphic Deposit at Knossos is beset with problems of dating (no ceramic evidence) [18] and of the definition of the Deposit itself. Most of the material was excavated from beneath a staircase at the north end of the Long Gallery in 1900 but, as Margaret Gill has pointed out, it is uncertain how many documents were found there and how many picked up in nearby magazines (Gill, KSPI 66). A number of strays were, however, recorded in Mackenzie's Day Books:

— in 1900, an isolated find in Magazine 4 of one nodulus and one medallion (interesting support for the association of such documents at Mallia);

— in 1901, two more sealings from Magazine 12 and three plus a broken tablet from Magazine 13. The description of the sealings leaves no doubt that these were inscribed crescents — though we don't know which crescents — so it was hardly unreasonable of Evans to have associated them with the main deposit excavated the previous year. [19]

Given the documents that we do have, what is most remarkable is their greatly expanded bureaucratic notation. It is not the number of written documents that is impressive — 20 bars and tablets; 18 medallions — but rather the sense of a full-scale literate bureaucracy at work in the Palace:

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[17] Including a two-sign match (bull's head, gate) on the medallion Fig. 2,8 and HM 267. 268.

[18] MM IIB: following Evans, PM I 271ff. and Yule, ECS 215ff., most scholars have accepted this date for the main deposit. MM III: J.J. Reich, AJA 74, 1970, 406ff. MM II and MM III: I. Pini in: ASSA 37ff., dividing the sealings into two groups: MM II crescents, and MM III document sealings (Class IV–V) plus 'advanced seal motifs'.

[19] It is going too far to claim that the 'Hieroglyphic Deposit' is merely an assemblage of material found in the general vicinity (J.G. Younger, rev. of Yule, ECS, GGA 230, 1988, 193). Also, Pini's division of the sealings into two chronological periods (supra n. 18) means that, first, we must separate a document sealing P-66 from the crescent P-67 although both were stamped by the same hieroglyphic prism (remarked by J.-Cl. Poursat in his response to Pini in: ASSA 55) and, secondly, we must assume that, while the Day Books record collecting nearby inscribed crescents, Evans added in unrecorded and incongruous stray sealings and 'advanced motifs' as well.

HM/AM No.	SM I No.	Seal 1	+	Seal 2	+	Inscription
A. CRESCENTS (* more or less intact crescents)						
192*	P69					
174*	P54					
175*	P75					
178*	P74					
185*	P67					—
1938.940*	H3					—
179*	P71					—
172*	P64		→		→	
207*	P65					
191*	P50			→		
181*	P59			→		

Fig. 4.1 Knossos: Sealings and Noduli (not to scale; hieroglyphics normalized)

HM/AM No.	SM I No.	Seal 1	+	Seal 2	+	Inscription
CRESCENTS (*more or less intact crescents)						
182*	P60					
200	P56					
189	P70					
194	P58					
198	P61					
190	P72					
173*	P52					
177*	P57					
176*	P62 (H4)					
170*	P53 (H2)	2				
171*	P68	3				

Fig. 4.2 Knossos: Sealings and Noduli (not to scale; hieroglyphics normalized)

HM/AM No.	SM I No.	Seal 1	+	Seal 2	+	Inscription
CRESCENTS (*more or less intact crescents)						
184	P55					
202	H(?)	4				
249	H(?)					
183*	P77	———				
187*	P78	———				
1910.206*	P76	———				
206*	P63					
B. NODULI						
131	Pe	5				
107	P51					

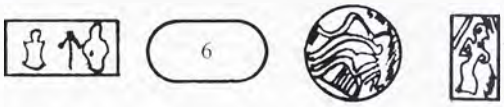
[NB: discovered in Magazine 4]

Fig. 4.3 Knossos: Sealings and Noduli (not to scale; hieroglyphics normalized)

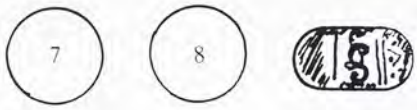
HM/AM No. SM I No.

C. 'DOCUMENT' SEALINGS

132 P73
(crescent-shaped)



180 Pf
(irregular unicum)



144 Pd
(class IV)

126 Pa
(class V)

1938.982 Pa
(class IV)

195 P66
(class IV)

D. OTHER SEALING TYPES

128 Pb
(class VII)

140 Pi
(pseudo-V)

Fig. 4.4 Knossos: Sealings and Noduli (not to scale; hieroglyphics normalized)

Fig. 5 Knossos Hieroglyphic Deposit: Isolate Signs on Crescents and Inscriptions (not to scale; hieroglyphics normalized)

Formula	SM I No.	Seal 1	+	Seal 2	cf.
	P69				
	P54				
	P61				
	P56				
	H3				
	P57				
	P74				
	P73				
	P67				
	P66				
	P76				
	P51				

Fig. 6.1 Knossos Hieroglyphic Deposit: Suggested Two-sign Formulae on Seal Impressions (not to scale; hieroglyphics normalized)

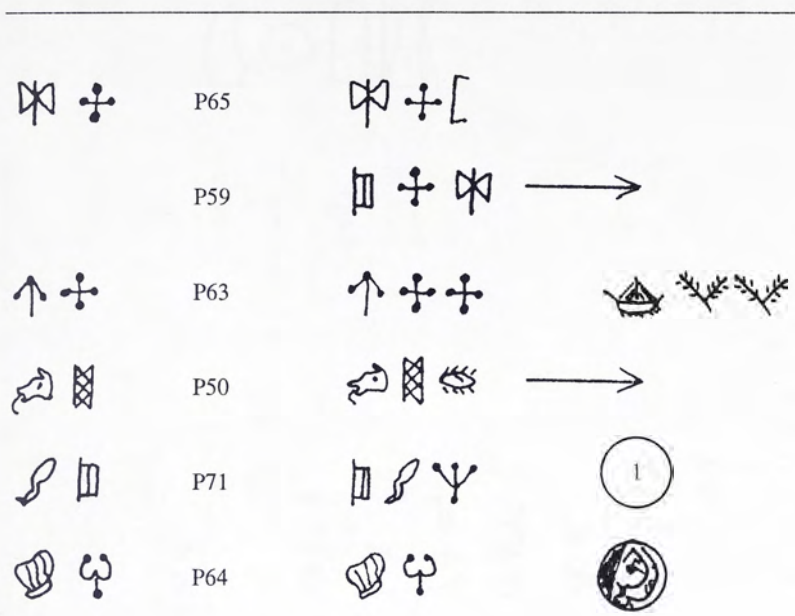


Fig. 6.2 Knossos Hieroglyphic Deposit: Suggested Two-sign Formulae on Seal Impressions (not to scale; hieroglyphics normalized).

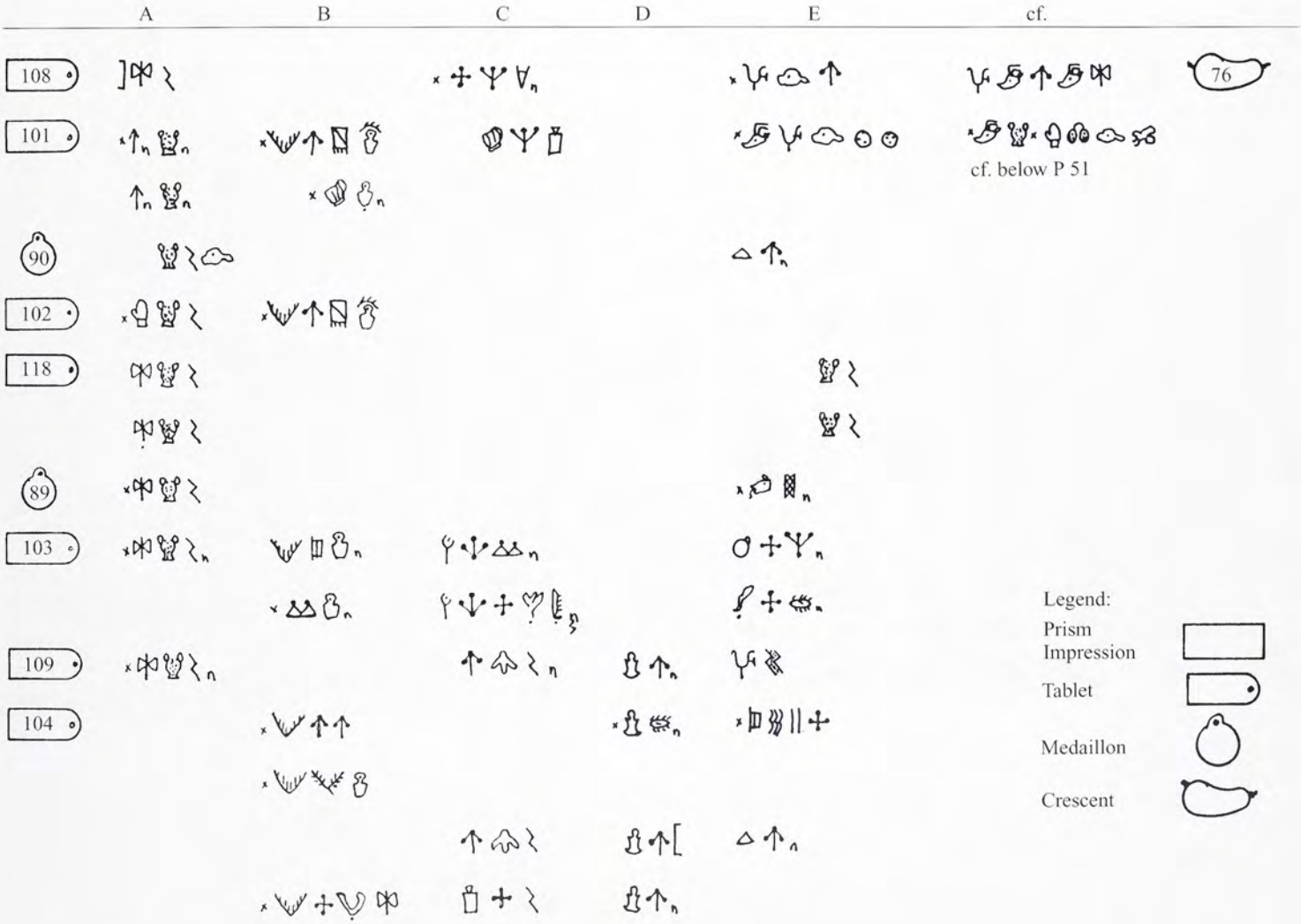


Fig. 7.1 Knossos Hieroglyphic Deposit. Two groups of Interlocking Hieroglyphic Documents (text extracts; hieroglyphics normalized)

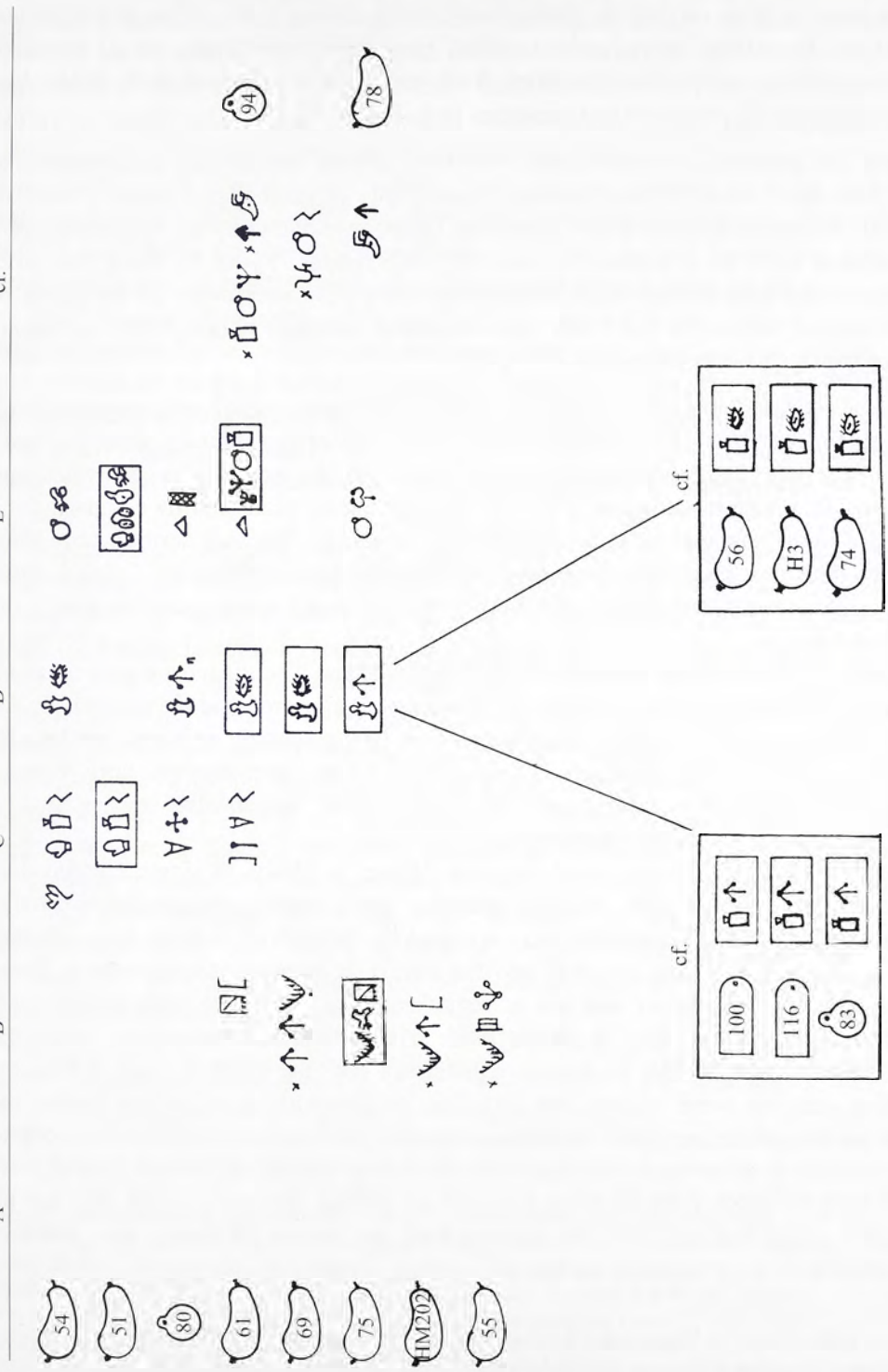


Fig. 7.2 Knossos Hieroglyphic Deposit. Two Groups of Interlocking Hieroglyphic Documents (text extracts; hieroglyphics normalized)

1. Scribes were writing on clay in fluent near-cursive hieroglyphic script which argues habitual practice. They filled three- and four-sided bars with text, usually on all available faces, while medallions were often inscribed front and back, sometimes with added line dividers to squeeze in still more detailed messages (e.g. P 83b, 85a).

2. The new and diagnostic crescents may have been created with scribal requirements in mind: these most spacious of Minoan sealing shapes easily accommodated whole groups of signs *(Fig. 4A)*. Expanded literacy is also witnessed (albeit negatively) by the appearance of a second new sealing type, the flat-based nodules *(Fig. 4C; classes IV and V)*, fairly flat cakes of clay pressed down over leather strips; these strips have been interpreted as the traces of leather or parchment documents (so I call them document sealings) although the documents themselves, of course, have not survived. [20]

When we add to these indications the by-no-means coincidental use of seals engraved with hieroglyphic signs, the strong overall impression is one of confident literacy extending well beyond that of any other Minoan palace or period. There was, for example, no equivalent big bang at Phaistos. The difference between the two palaces can be quantified by comparing the density of script on even fragmentary tablets and bars *(Table 4)*: Knossos scribes wrote four times as many signs on each available cm^2 as did their colleagues at Phaistos. *I would argue that there is a close and significant correlation between expanded literacy and the use of the hieroglyphic script.*

There is also a corresponding evolution in sealing practices. The diagnostic pommels and pegs of the ancient system of storeroom control have now disappeared and we shall never see them again on Crete. Seal-devices too have changed *(Fig. 4)*: geometric or purely ornamental seals have almost vanished from administrative use; instead, seal-types are now fairly equally divided between hieroglyphic inscriptions (or single signs which also appear in the hieroglyphic script), and naturalistic designs.

Glyptic practice has also become more complex. While, at Mallia, a single crescent had been stamped by two different seals, multiple stamping was a regular administrative habit at Knossos: over half of sealed documents were stamped by two, three or even four different seals *(Table 1)*. Yet, despite this practice, and the necessary interactions between so many different seal-users, the pattern of seal use is remarkably flat: only two seals appear even twice in our records, a little bump in an otherwise flat landscape of completely individual transactions. This is totally unlike the intensive pattern of seal use which we saw at Phaistos (where resident officials were sealing and resealing on-the-spot); it is just as unlike the non-intensive pattern which suggests external seal-owners sending lots of moveable goods to the Palace. Rather, it is a most singular sort of sealing pattern in which virtually no transaction is ever repeated. And when we factor in the sealing inscriptions, not only are no two inscriptions alike but we have no reason even to suspect that any two crescent inscriptions were written by the same scribe.

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[20] I. Pini, AA 1983, 559ff.; J. Weingarten, Kadmos 22, 1983, 8ff. Also, one (uninscribed) crescent was pressed over such leather strips, perhaps an intermediate type (HM 132 = P 73).

This is not to say that seal-users did not occasionally deal in the same commodities: a few crescent inscriptions include ideograms for GRAIN, OLIVES and WINE *(Fig. 5)*. But those who dealt in these commodities apparently made up their own rules as they went along: some wrote a single isolate sign, while others added details; some sealed by themselves, others found a sealing partner; some used seals engraved with hieroglyphic inscriptions, some just a single sign, and others the curious blob-and-line patterns perhaps meant to mimic hieroglyphic prisms. [21] Simply put, there is no common denominator. Even the repetition of animal-head texts (as on the medallions at Mallia) is not limited to these commodity transactions nor, in any case, were they matched by animal heads on the seals.

And yet another puzzle: while crescents are large nodules — often more than 3–4 cms long and about half as wide — and can hang from fairly sturdy cords, they almost certainly did not seal the sacks, wine skins or pithoi in which GRAIN, OLIVES or WINE would have been stored or transported. Anyway, what would have been the point? Each seal-owner would have delivered exactly one sack or jar, hardly provisions on a grand palatial scale. What then had the crescents sealed, and why should they list commodities which they did not secure?

Seventeen of the crescents are impressed by at least one intact or at least legible hieroglyphic seal (marked with asterisk on *Fig. 4*); their inscriptions may be divided, very tentatively, into eight or nine groups based on a possible system of two-sign formulae *(Fig. 6)*, a formula being a repetitive, independent and fixed group of signs. Not surprisingly, the largest two groups include the most common of all hieroglyphic formulae, TROWEL:ARROW and TROWEL:EYE. As Jean-Pierre Olivier has convincingly proposed, TROWEL:ARROW and TROWEL:EYE must represent two venerable Minoan institutions; he has suggested temple and palace. I find it a little difficult to accept this proposal because both formulae can appear on the same seal and even on the same seal face; while an individual can, of course, hold both religious and secular titles, one does not expect such contradictory institutions to be named on the same seal, at least not on seals used for administrative purposes. [22] I am thus inclined to drop the temple and interpret TROWEL:ARROW and TROWEL:EYE as two main branches of palatial administration; perhaps one as the royal estate, the other as a department of bureaucracy (such as the Treasury or Central Storehouse). [23]

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[21] *Fig. 3*: P-57, P-72 (cf.: CMS II,5 No. 247 at Phaistos).

[22] Cf.: of nearly two thousand seals published by G.T. Martin, Egyptian Administrative and Private-name Seals (1971) not one secular title relating to palace affairs or central administration is combined with a religious title; the few overlaps that do occur refer to local officials, e.g., 'mayors', whose seals also declare their local temple responsibilities (I am grateful to Prof. G.T. Martin for this information; per litt. 15.10.92).

[23] I suggest that the 'temple' is represented by another very common hieroglyphic formula, DOUBLE AXE:SEPIA (transcribed as A.SA), perhaps bureaucratic 'shorthand' for the full formula of A.SA-SA.GLOVE.VASE (CHIC H-042-019-019-009-052). Precisely *not* found among the palatial documents of the Knossos Hieroglyphic Deposit, A-SA is elsewhere inscribed on roundels, engraved on seals and stamped on sealings (E. Hallager – J. Weingarten, BCH 117, 1993, 2f. Fig. 1: MA WC [5]). Seals of the prepalatial Arkhanes script (EM III–MM IA) iterate A.SA-/-SA.GLOVE.VASE, perhaps indicating that the 'temple' was an

Some other proposed formulae, such as LEG:GATE, are also very common or, such as ANIMAL HEAD:FENCE, at least occur elsewhere but several, if correctly identified, are not especially prominent. Whether or not such formulae actually spelt out words (or were combinations of bureaucratic ideograms) is not our question here. Rather the point is that, as far as sealings can tell us, all formulae were doing precisely the same work as TROWEL:ARROW and TROWEL:EYE seals. It seems a reasonable working hypothesis that they too represent administrative sections or, in the case of less common formulae, sub-sections.

The precise function of such formulae is most uncertain, but there can be little doubt that the use and repetition of specific combinations of signs is common in hieroglyphic administration. In a provocative series of articles over 30 years ago, Ernst Grumach reached the conclusion that the hieroglyphic script must be basically ideographic; although perhaps including phonetic elements, it appeared mainly built up of combinations of complicated ideographs combined because they belonged to the same spheres of thought. [24]

This may be too extreme a viewpoint but it does seem explanatory of two groups of interlocking documents from the Knossos deposit *(Fig. 7)*. Grumach had, in fact, singled out for study (Grumach, Ancient Scripts 371–374) the family of signs in *Fig. 7*, Column B, with ANTLERS as prefix and commonly with the suffix of the HUMAN BUST, with or without an added 'holy' BRANCH. He demonstrated that these were related ideographic signs, combined together because they dealt with a single subject (whatever that may have been).

Not only the ANTLERS group, but also the signs in Column C illustrate a series of typical hieroglyphic pirouettes with signs changing their positions and alternating with each other in ways that hardly seem phonetic. Rather, this has the feel of administrative shorthand. The two 'departments of state', TROWEL:EYE and TROWEL:ARROW are listed in Column D while, in Column E, we find other echoes from seals and crescent inscriptions such as the formulae HORNS:THRONE, ANIMAL-HEAD:FENCE, PLOUGH:ANIMAL-HEAD and the related SPEAR:ANIMAL-HEAD. It may be here (if it is anywhere) that we would find toponyms or the names or titles of individuals concerned in the administration.

Grumach compared the SPEAR:ANIMAL-HEAD sign-group to such known Carian composite names, as, for example, 'spear-bearer of a god or goddess'; he also pointed out the apparent identity between the SPEAR:ANIMAL-HEAD formula plus crouched human figure on the hieroglyphic prism, P 29 *(Fig. 8)*, and the same elements on a naturalistic seal impression from the Hieroglyphic Deposit, where the entire animal replaces the ANIMAL-HEAD *(Fig. 9)*. [25] Once we allow that the latter scene may be at least partly translated into hieroglyphics, we admit the possibility that other seemingly naturalistic seals are, in fact, lurking hieroglyphs. This obviously affects our interpretation of the seals with single signs:

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established institution before the foundation of the palaces. The full A.SA formula is likely to be the precursor of the Linear A libation formula, A-SA-SA-RA-ME (independently suggested by J. Hooker, Kadmos 31, 1992, 106).

24 Grumach, Ancient Scripts III, 346ff.; id., Kadmos 2, 1963, 7ff.; ibid., 84ff.; id., Kadmos 1, 1962, 153ff.

25 Grumach, op.cit., 350f. The latter was interpreted by Evans, PM I 273 as the goat Amaltheia suckling the infant Zeus... a somewhat unlikely explanation since the animal seems to be male.

Fig. 8 Hieroglyphic Prism (P 29 – CMS I Nr. 425c).

Fig. 9 Sealing (Pf – HM 131).

Fig. 10 Sealing (P 72 – HM 190).

Fig. 11 Sealing (H3 – AM 1938.940)

Fig. 12 Sealing (no SM I No. – HM 132d)

a moufflon head such as P 72 *(Fig. 10)*, for example, is not a sign known in the hieroglyphic syllabary; there are thus good grounds for separating it from the bukranium, H3 *(Fig. 11)*, which, if accompanied by a second sign or reiterated (i.e., an 'inscription') will be allowed entry to CHIC. Again, a seal impression of a bird-headed woman *(Fig. 12)* is classed as a naturalistic engraving but a similar robed lady discovered by J.-P. Olivier sketched on a hieroglyphic bar (H-4 on P-100d) will probably be accepted as a sign in the syllabary. We may wonder if any Minoan would have understood the one as on and the other as beyond the borderline of seals meant to be 'read'.

If the hieroglyphic bureaucrat did move in a world of pseudo-naturalistic seals, how did he regard the famous portrait gems, Evans's so-called priest-king *(Fig. 13)*, or the young prince *(Fig. 14a)*, or the profile of an Egyptian-eyed man *(Fig. 14b)*; the latter in fact, the partner of

Fig. 13a.b Crescent Sealing Partners (P 71 – HM 179a. b).

Fig. 14a.b Crescent Sealing Partners (Pf – HM 180a. b).

the young prince. [26] Were they so many elaborated HUMAN BUSTS — with or without the holy branch? We cannot hope to judge but we can at least compare them functionally to their glyptic peers. For example, the priest-king belongs to a small sub-group of three crescents, the only crescents without added scribal inscription *(Fig. 4A)*; each is stamped by a formulaic hieroglyphic seal plus a second seal: in one case that is by the priest-king, the second by the bukranium already allowed as a hieroglyph, and the third by a round-faced seal with hieroglyphic inscription. It is difficult to divorce the glyptic function of the priest-king from that of these other sealing partners.

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26 Evans, PM I 271 and Evans, SM I 271 pair the 'king' with the 'prince'; however, Prof. I. Pini corrects this combination to the 'prince' plus an 'Egyptian-eyed' man.

Beyond the simple fact that both seal-owners must always have been present for the task, the relationship between such sealing partners is opaque. Yet perhaps not entirely opaque. The sealing of intact crescents, while variable, fluctuates within strict limits. We can define these limits as from zero to four seal impressions, stamped by zero to two different seals *(Table 2)*. Note that, when intact crescents are multiply stamped by different seals, each partner stamps once or each partner stamps twice. No one ever stamps thrice, which implies that the number of seal impressions, unlike those on roundels, is probably not counting anything, nor is it the result of personal inclination or enthusiasm. Rather, it seems structured.

First, on intact crescents, there is always quantitative equality between sealing partners; secondly, no one ever leaves his partner to join another sealing combination (two conditions, incidentally, which remind us of the later Multiple Sealing System at Zakro). Thirdly, no hieroglyphic seal ever stands alone: if it has no sealing partner, it will itself be stamped twice ... as if its repeated impression compensates for the absence of a partner; drawing attention (as it were) to an explicit acceptance of sole responsibility. This implies that the ideal glyptic act was that of two seal-owners joining together to stamp a joint crescent transaction.

This hypothesis, combined with our earlier observations on possible administrative formulae, suggests that ideally (though not always) the perfect Knossos crescent was stamped, first, by a hieroglyphic seal with a two-sign administrative formula, and, secondly, by a seal that we cannot normally identify as belonging to the same — or perhaps to any — administrative section. Thus, the second seal seems to have had a different function from that of the first seal, even if, as is commonly the case, it is also a hieroglyphic seal. In other words, there appear to be different levels of hieroglyphic seals. Although we know nothing of these levels, we can at least be reasonably sure that TROWEL:ARROW and TROWEL:EYE and, by extension, those in the same sphragistic situation served some official administrative purpose. Not, perhaps, as office seals in the strict sense but rather as seals of office sufficiently personalized to allow the identification of the individual using them; that is, they are institutional seals with a built-in Minoan PIN code. That, in my view, is the function of the decorative ornaments and fillers that have so bedeviled the work of CHIC. That there was some such individualizing system is perhaps implied by the many TROWEL:ARROW and TROWEL:EYE seals reproduced in Scripta Minoa and the CMS volumes: no two are alike; all are clearly distinguished by added decorations or even by the shifting orientation of signs. Decorative elements thus have meaning, a meaning perhaps quite independent of the sign-groups themselves.

There is yet another factor to be considered before the ideal crescent transaction is completed: the scribal inscriptions also added while the clay was still wet *(Table 3)*. The inscriptions increase the already strong sense of individual transactions: all are different, their structures inconsistent, with not even a hint of any scribe being responsible for more than a single crescent. When we take together

— this individuality of inscriptions,
— plus individuality of seal impressions, and

— an absolutely flat pattern of seal-use

we are drawn to the conclusion that the 30 crescent transactions were not executed in the Palace by resident officials and resident scribes, but elsewhere, conceivably in 30 different districts.

If each formula-seal-owner was resident in a territory, he could not possibly have utilized 'The Great Seal' of the Royal Estate or of the Treasury or Stores. Rather, it would have sufficed to have had at hand an institutional seal that pointed to him personally (for proper recording when the crescent arrived at the Palace or in case of legal challenge). If we are on the right track and the 'formula-official' was in the field, then this holds equally for his scribe (if he was not his own scribe) as well as for the sealing partner who stamped the same crescent. This partner could have been either another official representing a different bureaucratic level or department, or possibly the responsible person of the district, that is, the bureaucrat's local counterpart. We would expect two bureaucrats always to seal in the same way and this is clearly not the case on the crescents. If, however, one seal-owner represented the Palace and the other the local jurisdiction, that might account both for the underlying glyptic pattern and its not infrequent blurring. [27] We know nothing of the status of any district — potentially from royal estate to semi-independence — but exactly such conditions would alter sealing patterns: major districts or those nearest Knossos would not necessarily interact with the centre in the same way as more remote areas; the chief of Arkhanes (say) could exercise very different sphragistic options than a village elder.

If palace and district authorities were jointly involved in crescent transactions, a number of which included commodity ideograms, the most likely explanation is that those transactions dealt with tax or tribute payments (with ideograms marking some of the commodities collected). I have argued that the crescents did not actually secure goods — at least not such goods as grain, olives or wine — but they could have indirectly sealed them; that is, crescents could have hung from the boxes used to transport written tax records to the Palace. [28]

Summing up, it seems probable that the bureaucratic activity reflected in our records was not concerned with daily accounts, but rather a single, specialized administrative activity; there are reasons to think of tax returns, [29] but other explanations are perfectly possible.

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[27] This might also explain why one formulaic prism took a sealing partner for his crescent P-67 but not for his document sealing P-66: a local seal need not be involved in his correspondence with the Palace.

[28] I am not able to combine this hypothesis with Ingo Pini's discovery of traces of gold in the clay of six crescents (ASSA 53). He suggested that they had sealed boxes containing gold – which would support tax/tribute receipts – but one of these sealings (HM 207) is inscribed with the GRAIN ideogram; the others (HM 185, 198, 184, 204, 187) are a remarkably mixed lot.

[29] In this paper, we have sensibly not much discussed the written documents, but it is noteworthy that numbers listed on the bars frequently add up to very high totals – not uncommonly thousands of units (Olivier, supra n. 12). Also, round number are surprisingly common: 20, 30, 40 etc., 100, 110, etc., 250, 300, 450, 1,300, 2,300, 6,400 and Mallia's contribution of 7,000. Because the bars have no commodity ideograms, Olivier suggests (p. 74f.) that they might be census records, but it is hard to accept such perfect attendance in any human population (sheep may well be counted in round numbers [Olivier, supra n. 12], yet herd tabulations hardly need the complex administration demonstrable on the Knossos bars). One must not forget that the bars have 'string

What does seem certain, however, is that the Knossos hieroglyphic bureaucratic system has almost nothing in common with day-to-day storeroom accounting as expressed by the sealing system at Phaistos. While the huge disparity in sealing numbers is undoubtedly due to the hazards of preservation, I doubt that chance is responsible for the absence of pommels and pegs at Knossos. In return, among the thousands of sealings at Phaistos, there is not a single crescent sealing and, even more important, with only one possible exception (supra n. 10), none is stamped by a hieroglyphic seal. If, as I propose, crescents were at least partly developed for scribal reasons, they belonged to the general hieroglyphic expansion of literate notation, the same movement that led to the engraving and administrative use of hieroglyphic seals. Even if these seals do not proclaim individual names or titles, or are not dedications or commemorations, the way was open for such developments. What a strange twist to discover instead that inscribed seals completely died out.

Can you imagine Palace officials hanging up their inscribed seals and giving up the hieroglyphic script without a struggle? [30] Yet, when we next view administrative debris at Knossos in the Temple Repositories, scribes are writing in Linear A, [31] officials are stamping semi-literate roundels, and there is good reason to associate a decline in literate instruments with the imposition of a separate seal-owning class of officials (Sealing Studies II; cf. *Table 4*). The only remaining traces of the hieroglyphic system were in glyptic: occasionally seen in the stamping of roundels, [32] (although it is uncertain if this reflects an enduring administrative convention or merely the survival of some gemstones), but especially in the habit of multiple stamping which continued at the Temple Repositories and down (at least at Zakro) into LM IB (Weingarten, SSMC I, 289–292). This multiple sealing system, however,

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holes' which could mean that they were attached to other documents that could have clarified their contexts. Given the evidence from Mallia, it is not likely (however tempting) that bars were attached to medallions. Neither were they likely to have been attached to crescents, for the limited evidence of scribal 'hands' suggests that bars (but not crescents) were probably written in the Palace: it looks as if the same hand wrote the tablets P-103 and P-107 (Olivier, personal communication) and possibly also the medallion P-91.

So, while the bars theoretically could refer to anything at all, their even accounting rather looks like tax records, with perhaps even a whiff of tribute about them, enough (at least) to make one think about levels of imposed obligations. Since there is nothing a palace likes better than collecting taxes, I suggest that it is a fair assumption that the high numbers mean goods coming in. The converse also is usually true: relatively low numbers hint at goods going out, and that is what we usually (though not always; e.g. P-83) find on medallions; I am inclinded to interpret medallions as records of goods taken out of storage, i.e., as the literate, hieroglyphic equivalent of Linear A roundels.

30 In seeking to explain the change of script, we should avoid our alphabetic bias which assumes that syllabic scripts are naturally superior to Hieroglyphics (the staying power and flexibility of a logographic system is well illustrated by Chinese). One could as easily argue that a highly pictorial script, with naturally recognizable hieroglyphs and extensive use of set formulae, actually would have been more accessible to a larger group of readers (see S. Houston – D. Stuart, Current Anthropology 33, 1992, 589ff.).

31 It is uncertain whether or not the scripts briefly coexisted on any one site. Hieroglyphic and Linear A documents are found together in the MM IIIB Mallia 'Hieroglyphic Deposit' (L. Godart in: H. van Effenterre, Le palais de Mallia et la cité minoenne [1980] 579ff.; O. Pelon, BCH 107, 1983, 703). However, this 'deposit' was a mixed dump, which could simply indicate that scribes worked in this part of the palace over a fairly long period; cf.: the mixed scribal traditions at Phaistos (supra n. 4), possibly an accumulation of documents over ±15 years (Weingarten, Sealing Studies II, 290).

32 E. Hallager, BSA 82, 1987, 64ff.

was no longer an active bureaucratic adjunct to writing but an aliterate semiological code which may have had nothing to do with the Linear A administration in the Palaces.

Table 1 Knossos: Number of Different Seals by Sealing-types

	Crescents	Noduli	'Documents'	Molars
0 seals	3	0	0	0
1 seal	7	1	4	1
2 seals	12	1	0	0
3 seals	0	0	1	0
4 seals	0	0	1	0
Uncertain (Sealing broken)	9	–	–	–

Table 2 Knossos: Number of Seal Impressions on ± Intact Crescents

0 seal impressions	3
1 seal impression only	3
2 impressions same seal	4
1+1 seal impressions	10
2+2 seal impressions	1

Table 3 Knossos: Seal Impressions & Inscriptions on ±Intact Crescents

	Number of Seal Impressions				
	0	1	1 x 2	1+1	2+2
no inscription	0	0	0	3	0
1 sign or sign-group	1	2	2	3	0
2 signs/sign-groups	1	1	2	3	0
3 signs/sign groups	1	0	0	1	1

Table 4 Comparative Density of Cretan Scripts (space calculated on all available sides)

	No. Characters/Signs per cm^2
MM IIB Phaistos: tablets and bars	0.33
MM IIB Mallia: bars	0.18
MM IIB/IIIA Knossos: tablets and bars	1.12
LM IB Ayia Triada: tablets (random sample)	0.60
MM IIIB/LM I Knossos: Linear A tablets	0.87
LM IB Arkhanes: Linear A tablets	0.54
Linear B Knossos: tablets (random sample)	0.58
[ditto, if weighted for single-sided use	1.16]

LES BAGUES-CACHETS CRETO-MYCENIENNES: ART ET FONCTION

AGNES XENAKI-SAKELLARIOU

Ma communication fait suite à celle que j'ai présentée au dernier colloque de Marbourg, en 1985, sous le titre «Technique et Evolution de la bague-cachet dans l'art créto-mycénienne». J'avais alors traité les bagues-cachets mycéniennes de façon détaillée; en revanche, mon exposé était peu étoffé au sujet des bagues-cachets minoennes parce que je ne pouvais pas bénéficier de l'aide d'un technicien [1]. Aujourd'hui, je suis mieux outillée, car M. A. Fountoulakis, technicien du Musée d'Iraklion, a eu la gentillesse d'examiner certaines bagues du Musée avec un microscope ordinaire. J'ai ainsi obtenu des renseignements approximatifs sur la structure des bagues du Musée d'Iraklion. Mon objectif aujourd' hui est de compléter la recherche sur la bague-cachet et de rectifier certaines estimations erronées fournies par ma communication précédente. La seconde partie de la communication s'attache à la fonction de la bague-cachet.

Lors de ma communication de Marbourg, mon horizon débutait à la période du MM III–MR I, avec l'etude de la bague moulée en plomb de Sphoungaras [2] et la bague en or martelée de Mavrospilio [3]. Aujourd'hui, je suis en mésure d' élargir cette information, me fondant sur deux autres spécimens provenant de la grotte de Gerontomouri à Lassithi [4]. Il s'agit de deux bagues; l'une en bronze, l'autre en argent qui portent respectivement sur leur chaton circulaire un motif abstrait — des bandes qui se croisent — et des plantes de papyrus. Le contexte des ces bagues est très vaste (allant de l'époque prépalaciale à la fin des anciens palais, peut-être même au début de l'époque des nouveaux palais) [5]. Cependant, nous pouvons cerner de plus près la chronologie des bagues de Gerontomouri grâce à leurs motifs

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* Je tiens à remercier M. Ch. Kritsas, directeur du Musée archéologique d'Iraklion, ainsi que Mme K. Demakopoulou, éphore des antquités préhistoriques du Musée National d'Athènes, qui m'ont grandément facilité la tâche dans l'étude du matériel de cette communication. Ma gratitude s'adresse également à Mme Y. Rizakis, qui a réalisé les dessins, et à Mme P. Starakis, qui a revisé le texte français.

Abbréviations:

Hogarth	D.G. Hogarth, JHS, 22, 1902, 76sq.
Levi, H.T.	D. Levi, ASAtene, 8/9, 1925/26, 71sq.
Levi, Z.	D. Levi, ASAtene, 8/9, 1925/26, 157sq.

1 A. Xénaki-Sakellariou dans: CMS Beih. 3, 323sq.
2 CMS II,3 nº 239.
3 CMS II,3 nº 38.
4 K. Davaras, AEphem 1986, 33sq.
5 Ibid. 34.

proches de ceux qui décorent les empreintes de Phaistos: voir CMS II,5 n°s 63–69, pour le motif de bandes entrecroisées de Gerontomouri, et les empreintes de la même provenance, CMS II,5 n°s 202. 270. 276. 305, pour le motif végétal de la bague en argent de Gerontomouri. Ces parallèles nous permettent de dater les bagues de Gerontomouri du MM IIB–MM IIIA.

Ingo Pini avait déjà reconnu des empreintes de bague en métal sur des spécimens de Phaistos [6]. Toutefois l'une d'elles me semble moulée (CMS II,5 n° 5). La figure du démon à carapace est grossière. Le modelé, empâté, diffère nettement des autres empreintes et rappelle les gemmes moulées en verre. Pour ma part je considère que les empreintes CMS II,5 n°s 202. 270. 304 sont de toute évidence issues de bagues en métal.

Fig. 1 Coupes des moules de la bague de Malia: a) Moule de l'anneau et du support due chaton. b) Moule du chaton: droit portant la gravure et cheville pour l'encastrement.

De toute évidence donc à l'époque des anciens palais, on fabriquait des bagues-cachets en métal martelées et gravées au burin et des bagues entièrement moulées (y compris la gravure). Dans «Early Cretan Seals» P. Yule affirme l'existence, à la periode des anciens palais, de bagues-cachets en argent, en or et plomb [7]. La trouvaille de Gerontomouri nous prouve que le bronze servait également à la fabriction de bagues-cachets. Durant la période intermédiaire entre les anciens et les nouveaux palais, on continuait à fabriquer des bagues en plomb moulées, mais plus élaboré que le spécimen de Sphoungaras. La bague en plomb de Malia est un bon exemple [8]. Selon Ch. Chatziliou, le métal était coulé, en un premier temps, dans un moule triple pour fabriquer la moitié de l'anneau et du support du chaton, légèrementle creux qui devait accueillir la cheville de l'autre partie *(Fig. 1a)*. Ensuite, dans un second moule double on coulait le chaton, qui, au droit, portait l'intaille et, au revers la cheville *(Fig. 1b)*. Celle-ci, devait s'emboîtait dans le support creux, formé par l'assemblage des deux moitiés sortis du prémier moule.

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6 I. Pini, CMS II,5 p. XIII.

7 Yule, ECS 77, reconnait les empreintes de bagues dans les spécimens, CMS II,5 n°s 201. 202. 205. 245. 259. 270. 276. 277. 304.

8 C. Kopaka, BCH 108, 1984, 3sq.

Les Minoens ont très rapidement pris conscience des deux inconvénients que pésentaient les techniques qu'ils utilisaient:

1. Les intailles moulées, en plomb, conféraient à la gravure un modelé grossier.

2. La face circulaire répondait mal aux nouvelles exigences des scènes developpées en longueur, introduites dépuis peu dans le répertoire de la glyptique. Aussi déciderent-ils d'adopter la forme ovale et de substituer progressivement le bronze au plomb, pour les bagues bon marché. Ces bagues en bronze faisaient probablement concurrence aux cachets en pierres sémi-précieuses, parce qu'elles étaient plus faciles à fabriquer et à graver. Pour les bagues de luxe, on continuait à utiliser l'or. Il est vrai que les fouilles ont fourni relativement peu de bagues en bronze, mais cette constatation est trompeuse. Taillée dans une fine feuille de bronze la bague se conserve difficilement. Bon nombre de ces bagues ont disparu par suite de l'oxydation du métal. Certaines empreintes de H. Triada proviennent sans aucun doute de bagues de bronze. Nous y reviendrons.

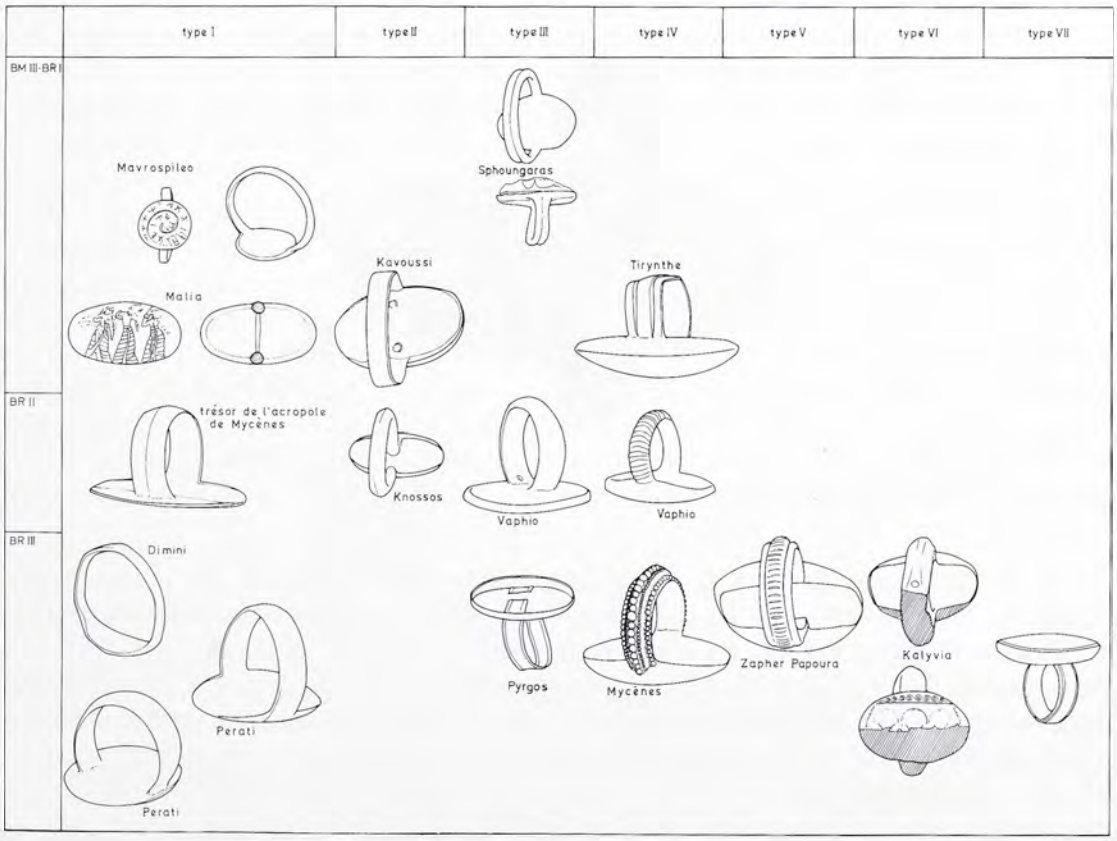

Fig. 2 Planche avec la typologie des bagues-cachets.

Je ne voudrais pas alourdir ma communication en répétant les points que j'ai développés sur la typologie des bagues-cachets à Marbourg. Néanmoins, les données nouvelles ou des reflexions ultérieures m'ont conduite à établir des estimations différentes.

Type I *(Fig. 2)*: Forme simple fabriquée en plomb, bronze, argent ou or, moulée ou martelée sur une feuille de métal. Chaton plus souvent circulaire qu'ellipsoidal, au moins au début. Anneau en ruban, d'une seule pièce avec le chaton. Deux nouveaux spécimens déjà mentionnés plus haut, complètent l'image de ce type. Le type I domine aux débuts et à la fin de l'époque palatiale.

Entre le début et la fin de l'époque palatiale, le type semble disparaître, à l'exception d'une variante représentée par deux bagues provenant du Trésor de Mycènes [9], et qui combine le type I, pour la structure, au type IV pour la forme. Moulées conformement au type I ces bagues sont modelées sur le revers selon le type IV . N'ayant pas saisi l'importance de cette combinaison, je ne l'avait pas signalée dans ma communication de Marbourg. Je crois pouvoir y reconnaître l'oeuvre d'un artiste minoen travaillant à Mycènes. Il semble avoir appliqué la technique de la fonte telle qu'on la pratiquait en Crète, tout en imitant la forme helladique du revers.

Fig. 3 Bague en bronze du type IIa. CMS II,3 nº. 15.

Nos connaissances du type II *(Fig. 2)* sont incomplètes à cause de la rareté des spécimens. Nous tenterons de les compléter à l'examen des empreintes. Généralement de forme ovale allongée (aux côtés presque rectilignes) décorées de scènes de culte, certaines empreintes de H. Triada semblent provenir de bagues faites sur le modèle du spécimen de Knossos [10] qui représente le type IIa de ma typologie *(Fig. 3)*. Une feuille de bronze ovale formait le chaton tandis qu'un ruban simple servait d'anneau fixé au revers du chaton par un petit rivet en argent à chaque extrémité. Faisant partie de la décoration, les têtes des rivets

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9 CMS I nºs 17. 18.

10 CMS II,3 nº 15.

sont souvent visibles sur l'empreinte. Un autre spécimen de bronze, type IIb [11], de Kavoussi, présente un chaton fait d'un noyau plat de plomb, enveloppé d'une feuille de bronze. Comme dans l'exemple précédent, l'anneau, est fixé au revers du chaton par un petit rivet à chaque extrémité. La méthode qui consiste à recouvrir un noyau de métal de qualité inférieure par un autre métal plus fin, est appliquée dans le type V, comme nous verrons plus loin.

Le type III *(Fig. 2)* présente un chaton ovale fait d'une intaille en pierre sémi-précieuse, encastrée dans une feuille de bronze ovale qui se rabat sur elle [12]. Ce type a abouti au type VII, de la fin des palais, après être passé par une phase intermédiaire, illustrée par une bague fragmentaire de Pyrgos *(Fig. 2)* [13]. Le support ovale en or, aux bords élevés, devait porter l'intaille. Nous ignorons tout de la matière de l'intaille et de la manière dont elle était encastré. L'anneau en ruban, également taillé dans une feuille d'or, était fixé entre l'intaille et le support; les deux extrémités de l'anneau se glissaient dans deux fentes symétriques du support.

Tout compte fait, le type IV *(Fig. 2)* apparait comme une création mycénienne. Les spécimens minoens dont nous disposons semblent être en effet des repliques plus ou moins réussies de prototypes mycéniens. Les bagues qui proviennent des couches d'occupation achéenne dans les régions de Knossos, Archanés, et Kalyvia [14], n'ont rien à envier à la fabrication des spécimens du continent. Parallèlement, on possède des spécimens d'une structure qui tout en imitant la configuration extérieure du type, ils présentent un chaton fait de deux feuilles soudées sur leurs contours. Le revers a la même configuration que le prototype mais il est rendu au repoussé [15].

Le type V *(Fig. 2)* est une variante du type IV. Il en diffère par son noyau de métal non précieux, recouvert d'une fine feuille d'or. Connu en Crète, il apparaît comme une adaptation créée par les Minoens pour économiser le métal précieux [16]. D'après la description de Seager, qui l'a découverte, la bague de Mochlos, aujourd'hui perdue, appartient à ce type [17].

Le type VI *(Fig. 2)*, une variante du type IV également, est une création mycénienne destinée à des fins magiques. Il est représenté en Crète par un seul spécimen, provenant de Kalyvia et daté de la période de l'occupation achéenne.

Le type VII *(Fig 2)* est la prolongation du type III. Le principe reste le même, mais la structure et la matière diffèrent. Au lieu d'être une feuille plate sur laquelle est encastrée

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11 Bague de Kavoussi CMS II,3 nº 305. Elémentaire dans ma communication de Marbourg, la description de deux bagues se fonde ici sur l'examen de A. Fountoulakis.

12 Bague-cachet de Sphoungaras CMS II,3 nº 240.

13 Evans, PM II 75 Fig. 34B.

14 Bagues du type IV trouvées en Crète: a) CMS II,3 nº 51 (Isopata, Knossos); b) E.A. et H.W. Catling, BSA 69, 1974, 223 J8 (Sellopoulo, Knossos); c) CMS II,3 nºs 103 et 114 (Kalyvia). J.A. Sakellarakis, Αρχάνες (1991) 78 Fig. 53.

15 Xénaki-Sakellariou, op.cit. (ci-dessus n. 1) 327. A cette variation appartiennent une bague de Mycènes (CMS I nº 119) une autre de Kalyvia (CMS II,3 nº 103?) et les bagues de Aïdonia (CMS V Suppl. 1B nºs 113. 115), qui portent une décoration cloisonnée sur leur revers, insolite, mais reussie. Voir K. Krystalli-Votsi dans: Φίλια έπη εις Γ.Ε. Μυλωνάν Γ' (1989) 34sq.

16 Xénaki-Sakellariou, op.cit. (ci-dessus n. 1) 327.

17 R.B. Seager, Exploration in the Island of Mochlos (1912) 91.

l'intaille, le support est ovale et concave en même temps. L'intaille, plaquette métallique, ovale, plaquée d'une feuille d'or est posée sur le support concave. A ce type appartiennent trois bagues de la tombe A d'Archanés, datées de la periode de l'ocuupation achéenne [18] et la bague de Varkiza en Attique [19]. Par ailleurs, des plaquettes ovales en métal plaquées de feuille d'or, provenant de Crète [20], qui restaient enigmatiques jusqu' à présent, peuvent être interpretées comme des plaquettes du type VII. L'évolution du type III au type VII marque un passage vers une fabrication plus sophistiquée. Toutefois, la gravure est plus facile à tracer. Au lieu de tailler une pierre dure, on coulait l'intaille dans du plomb et on la plaquait d'une feuille en or. Je crois qu'il s'agit d'une création minoenne, de son début (type III) à son aboutissemment (type VII).

La gravure a experimenté deux techniques déjà décrites dans ma communication de Marbourg. J'avais soutenu l'hypothèse que les Minoens pratiquaient la technique au 'χειροκάλεμο' et les Mycéniens la technique au 'σφυροκάλεμο'. L' examen au microscope a permis à Mr. Fountoulakis de confirmer cette hypothèse.

L'évolution de la bague-cachet telle que nous l'avons reconstituée est cohérente. Elle débute en Crète avec des formes simples, inspirées du type prépalatial de la bague en ivoire, en os ou en pierre, qui n'a rien à faire avec la bague portée au doight [21]. L'évolution vers des formes plus compliquées est marquée par l'introduction du type III. Vers la fin du 16ème siècle, on voit apparaître le type IV, d'une toute autre structure. Le chaton est modelé sur un noyau en or et l'anneau est souvent décoré des rayures ou des granules. Pour des raisons developpées plus haut, nous croyons pouvoir affirmer que le type IV s'est formé sur le continent grec. Repondant à des objectifs différents, les types V et VI se placent néanmoins dans la ligné du type IV.

Nous venons au second objectif de cette communication, à savoir la fonction des bagues-cachets, que nous tenterons à définir en nous fondant sur ses empreintes. Ma première demarche sera d' identifier les empreintes issues de bagues en métal.

Me fondant sur le matériel qui provient des contextes bien datés et convenablement publiés, je me suis limitée pour la Crète aux groupes de Phaistos, H. Triada, Zakro et Chania. J'ai préféré ne pas utiliser le matériel de Knossos en raison de son état fragmentaire, du manque d'informations satisfaisantes sur les conditions de sa découverte et, surtout, de l'absence de publication globale, même élémentaire.

Pour distinguer les empreintes de bagues-cachets en métal, je me fonde sur quatre critères:

1. La forme ovale de l'empreinte. A des rares exceptions près, qui datent du début de leur apparition (les specimens de Gerontomouri, Mavrospilio, et Sphoungaras au chaton circulaire), les bagues-cachets présentaient, en effet, un chaton ovale. Seules les gemmes talismaniques, qui sont taillées généralement dans la technique du 'cut style', ont une forme

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18 Sakellarakis, op.cit. (ci-dessus n. 14) 37.

19 P. Themelis, AAA 8, 1974, 427; id., ARepLondon, 1975, 4.

20 Spécimens de Selopoulo: E.A. et H.W. Catling, op.cit. (ci-dessus n. 14) 253 Pl. 37f. Fig. 14E; et de Kalyvia: L. Savignoni, MonAnt 14, 1904, 520 Fig. 11; 522 Fig. 12.

21 Yule, ECS 77.

amygdaloïde, voisine de l'ovale, mais qui s'en distingue néanmoins par ses extrémités tronqués [22].

2. Comme second critère, on tiendra le style de la gravure des bagues, surtout pour les bagues minoennes exécutées au burin fin, qui permet d'obtenir des figures minces, fluides et agiles. Dans le cas des empreintes helladiques, ce critère est presque inopérant, car le style des intailles en pierre mycéniennes est proche du style des bagues mycéniennes. Sans proposer d'explications, J. Boardman avait constaté cette similitude: «...in Late Bronze Age Greece where even the devices of the gold rings have more in common with style of the cut stones than they did in Crete» [23]. Pour ma part j'ai tenté de donner une explication dans un récent article [24].

3. La taille du chaton et le nombre de figures représentées constituent le troisième critère, complémentaire. Mais l'argument parraît être renversé: un décor à une seule figure a des chances, très rares, il est vrai, de provenir d'une bague métallique.

4. Quatrième critère, le répertoire iconographique, même s'il n'est pas déterminant il constitue néanmoins, tout de même un indice, qui renchérit sur les autres.

La seconde opération consiste à faire le tri des différents types de scellés estampillés par des sceaux, dès lors qu'ils nous renseignent sur le but de l'estampillage. L'opération est loin d'être facile: en raison de la matière — l'argile — les scellés ne présentent pas des formes rigides. Aussi, pour éviter toute confusion, j'ai préféré me fonder sur la fonction que sur la forme du scellé. J. Weingarten, en revanche, a choisi comme base de son classement la forme des scellés et a reconnu onze types différents dont la description est assez flouée [25].

L'examen de leur fonction m'a permis de distinguer trois catégories de scellés *(Fig. 4)*.

Les scellés de la première catégorie (A) ne portent aucune trace de liaison avec un objet quelcuonque: ni moulure d'objet, ni traces de ficelle, ni trou. Ils peuvent avoir la forme de plaquettes — rectangulaires, circulaires ou ovales — de 'pinched' ou de rondelles [26]. Les scellés de la deuxième catégorie (B) portent souvent les traces d'un objet et celles des ficelles qui l'entouraient. D'aucuns sont informes (ils recouvraient des pommeaux, chevilles etc.), d'autres se présentent sous la forme de plaquettes. Un groupe de scellés, qui cachetait, sans doute, des objets de petite taille, se présentent sous forme de plaquettes longitudinales-ovales portant, au droit, l'empreinte ovale du cachet et, au revers, parfois les traces de l'objet

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22 Un examen exhaustif des volumes CMS I, II, V prouve que dans l'ensemble des gemmes amygdaloides trouvées dans un contexte de fouilles moins de cinq spécimens n'ont pas les extrémités tronquées. Par ailleurs, à l'époque des anciens palais certains cachets ont une surface ovale: ex. CMS II,2 nos 34. 56 (scaraboides) et nos 55. 104. 126 (prismes trièdres).

23 Boardman, GGFR 32. 38. 42. 48.

24 Dans Sakellariou, MS 104sq., j'avais reconnu un style helladique, caractérisé par les contours nets, les volumes claires, l'articulation marquée, que j'ai appellé style B. Plus tard, quand Ch. Chatziliou m'a exposé la technique du poinçon (voir ci-dessus p. 314) utilisée par les Helladiques pour la gravure des bagues, j'ai réalisé que les graveurs de gemmes mycéniennes avaient été influencés par le style de bagues obtenu à la faveur de la technique utilisée. Voir A. Xénaki-Sakellariou dans: Ειλαπίνη. Τόμος Τιμητικός για τον Καθηγητή Νικόλαο Πλάτωνα (1987) 245sq.

25 Weingarten, Zakro Master 25.

26 Rarement la rondelle est percée d'un trou qui, cependant, ne fait pas partie de la structure, mais dépend du propriétaire qui trouve plus commode de le suspendre.

cacheté, mais toujours les traces des fines ficelles transversales qui l'entouraient. Parfois, de miniscules trous sont percés sur les deux bords. On a pensé qu'un morceau d'argile séparait le scellé de l'objet cacheté qui était entouré des fils dont les traces sont visibles sur des fines trous [27].

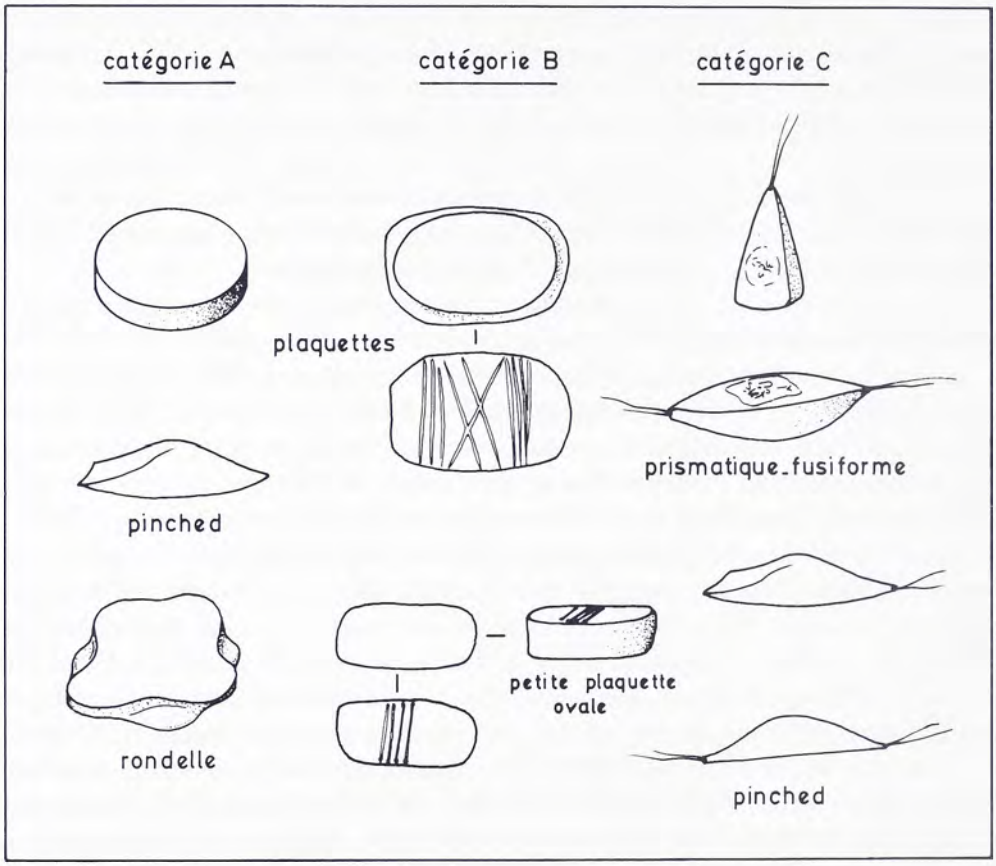

Fig. 4 Planche avec la typologie des scellées en argile

Les scellés de la troisième catégorie (C) étaient suspendus par une ficelle à l'objet qu'ils scellaient. Ce système permettait à l'évidence d'appuyer la bague sur le nodule d'argile sans exercer de pression sur l'objet même. Probablement évitait-on ainsi d'éndommager des objets peu résistants, rouleaux de parchemin ou papyrus notamment. Aussi peut-on imaginer que le scellé de la catégorie C jouait le rôle d'une étiquette suspendue pour être immédiatement visible.

27 Papapostolou, Sphragismata 14.

Les scellés de cette catégorie revêtent deux formes: tantôt ils adoptent la forme d'un prisme triédre fusiforme ou pyramidal, tantôt, ce sont des 'pinched' troués. La ficelle passait à l'intérieur du prismes traversant le nodule d'un bout à l'autre ou seulement en partie. Dans de rares cas, la ficelle passait par un petit trou percé à l'extrémité du nodule qui revêtait alors une forme pyramidale ou cônique. Les 'pinched' étaient suspendus à la ficelle introduite dans le petit trou percé à l'extrémité ou bien ils étaient traversés par une fine ficelle parallèlement à leur axe. Souvent, cependant, on note la fusion des deux types dans une forme prisme-pinched.

La matière des objets que cachetaient les scellés [28], a été idéntifié à du bois ou du cuir, mais pas à des feuilles de papyrus ou de palmier. Rien de plus normal, à mon sens, de ne pas distinguer des traces des plantes sur les scellés, puisque ces feuilles n'étaient pas cachetés directement. Ces feuilles étaient apparement enroulées et retenues par de fines ficelles dont les extémités étaient entourées d'argile sur lequel on apposait le cachet. C'est parce que le nodule était suspendu à une ficelle que les feuilles des plantes n'entraient pas en contact avec ce nodule et, partant, n'y laissaient aucune trace.

Les trois catégories de scellés suggèrent des usages différents: Les scellés de la catégorie A ne semblent pas être de vrais scellés, mais des articles autonomes répondant à divers fonctions difficiles à préciser. Il s'agissait probablement d'attestations, d'engagements et de récépissés ou peut-être servaient-ils à d'autres usages, difficiles à identifier aujourd'hui [29]. Dans la catégorie B on reconnaît des scellés servant à contrôler l'inviolabilité de la marchandise ou à légitimer les stades successifs par lesquels passaient les marchandises, qu'elles soient importées ou exportées. Parmi les scellés de la catégorie C, certains étaient destinés à des objets trop fragiles pour permettre l'apposition d'un sceau, d'autres servaient d'étiquettes. D'autres probablement avaient la même fonction que les scellés de la catégorie B.

Il nous reste maintenant à confronter nos hypothèses et nos constatations au matériel de Phaistos, de H. Triada, de Zakro et de Chania, en Crète, et de Pylos, sur le continent grec. Ces documents répondent, en effet, plus ou moins aux conditions que j'ai énoncées. Mon interêt se porte essentiellement sur l'usage des bagues et leur rapport avec les gemmes, dans une réciprocité quantitative, topographique et typologique. Précisons d'emblée que les conditions de travail ne sont pas les mêmes en Crète et sur le continent grec. La Crète est favorisée quantativement, mais on ne peut tirer aucune information du contexte des empreintes. Pour la plupart, elles ont été trouvées loin de l'endroit où elles furent estampillés. Ainsi les rapports topographiques entre les empreintes de bagues et les empreintes de gemmes restent inconnus. Au contraire, sur le continent grec, le nombre de spécimens est nettement plus limité, mais le contexte des trouvailles nettement plus satisfaisant dès lors qu'elles ont été découvertes *in situ*.

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28 M. Pope, BSA 55, 200. J. Weingarten, Zakro Master 38sq.

29 Voir B. Detournay – J.-C. Poursat – F. Vandenabeele (éds.), Fouilles exécutées à Mallia. Quartier Mu II, ÉtCrét 26 (1980) 193sq.

Examinons d'abord les scellés de Phaistos, tous du type B. Ces scellés informes étaient utilisés pour assurer l'inviolabilité des paquets, des coffrets, des portes, des dépôts etc [30]. Dans ce groupe, le nombre de bagues-cachets paraît limité, chose normale puisque la bague en métal venait à peine d'être introduite dans l'administration minoenne [31]. Le répertoire comprend des motifs décoratifs abstraits, des plantes, mais aussi des animaux (quatrupèdes, oiseaux, coquillages). Nous avons vu plus haut que ce répertoire se retrouve sur des bagues de la même époque [32]. Les bagues du groupe de Phaistos semblent avoir appartenu à des fonctionaires chargés d'assurer l'inviolabilité de lieux et d'objets d'une certaine importance.

Le groupe de H. Triada est composé de deux ensembles. Le plus important numériquement, tombé d'un étage supérieur et dispersé sur le sol, n'offre aucune indication précise sur le contexte. Le second, livré par un «built-in gypsum chest», dans une pièce voisine, n'a pas été decouvert dans de meilleurs conditions. Quant aux publications, elles sont peu explicites à cet égard [33].

J. Weingarten a reconnu vingt-cinq 'Metal signets' dans le matériel de H. Triada [34]. Pour ma part, sur un total de près de cent cinquante sceaux, j'identifie avec certitude une quinzaine d'empreintes. Dix autres empreintes semblent également issues des bagues mais le doute est permis [35]. Je ne fonde mon enquête que sur les spécimens qui sont identifiables à coup sûr. Les autres constitueraient une base aléatoire.

Les scellés sur lesquels ont été estampillés les bagues, sont essentiellement des prismes [36], et rarement des plaquettes ovales [37], qui semblent avoir été estampillées des bagues en métal du type IIa, portant des scènes de culte [38]. Il faut cependant ajouter quelques cas isolés de la categorie A et d'autres de la catégorie B [39]. Parfois, la forme resulte d'une fusion du prisme et du 'pinched'. Trois scellés, du 'Multiple Sealings System', portent deux empreintes, l'une cacheté par une bague, l'autre par une gemme [40]. Ce sont, à notre connaissance, les seuls spécimens de scellé 'multiple sealing system'(MSS) portant une empreinte de bague.

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30 D. Levi, ASAtene, 35/36, 1957/58, 44sq.; I. Pini, CMS II,5.

31 Les empreintes reconnus comme faites par les bagues sont, selon I. Pini, CMS II,5 nos 224. 270. 304 et 322.

32 Gerontomouri: voir ci-dessus n. 4.

33 M. Pope, op.cit. (ci-dessus n. 28) 200, expose brièvement les conditions de la découverte:«...the cretulae were found in successive years in the N-W Portico...fallen from above» avec des rondelles inscrites et des tablettes. Dans une piéce voisinante, on a trouvé «...a built in gypsum chest...full of a great number of cretulae probable between 250 and 300». Pope regrette de ne pouvoir assurer «...which of them were found in the gypsum chest». Quarante-cinq empreintes (Levi, H.T. no 118) sont découvertes avec une tablette dans une petite pièce au sud de la villa, qui est défini comme un ensemble «of small rooms, perhaps stores».

34 Weingarten, Zakro Master A/15 Appendix/Table 4.

35 Je reconnaîs des bagues sur les empreintes publiées par Levi, H.T. nos 25. 51. 54. 79. 110. 113. 114. 117. 125. 135. 137–141. 144.

36 Levi, H.T. nos 25. 79. 122. 125. 139. 140; nodules MSS 143+114.

37 Levi, H.T. nos 117a. 117b+110. 135 (elle porte des traces des rivets). 138(?). 143b+144 (traces des fils sur une des faces extérieures).

38 Voir les scellés Levi, H.T. nos 135. 137. 143. Voir p. 3. 4.

39 Levi, H.T. plaquette A nos 54. 113a, plaquette B no 113b.

40 Levi, H.T. nos 114+143a, 143b+144, 117+110, 141+28.

Les bagues d'H. Triada ont donc servi à cacheter des nodules autonomes, des scellés fixés sur des objets en forme de petite plaquette ovale et surtout des scellés de la catégorie C suspendus à une ficelle.

La fréquence des empreintes réalisées à partir d'un sceau à H. Triada est très variable. En ce qui concerne les bagues précisement, deux d'entre elles ont fourni un nombre considérable d'empreintes (respectivement deux-cents-cinquante et quarante-deux), mais en général les bagues donnent entre une et cinq empreintes. S'efforçant d'expliquer cet écart J. Weingarten a identifié les propriétaires de bagues aux nombreuses empreintes à des personnages 'privilégiés', chargés de contrôler à eux seuls un département entier. C'est M. Pope qui a envisagé la question de savoir si le sceau répond à une personne ou à une fonction [41]. Les deux éventualités, du reste, sont envisageables. De toute façon, hors de leur contexte initial, les empreintes d'H. Triada ne sauraient nous revèler leur rôle. Néanmoins, la découverte sur les mêmes lieux de tablettes inscrites et de rondelles nous autorise à penser qu'une partie au moins de ces empreintes provient d'archives. Le répertoire des empreintes de bagues est dominé par des scènes religieuses. Puis viennent les jeux sportifs: tauromachie, jeux d'arêne, courses de chars. Seules deux empreintes portent des scènes inspirées de la nature [42]. Ce répertoire est très proche de celui qui décore les bagues qui nous sont parvenues.

Dans le groupe de Zakro, les scellés tombés d'un étage supérieur ont été mêlés à d'autres objets de céramique, métal etc. Aussi le contexte initial nous est-il inconnu. Parmi les deux-cents-trente-cinq sceaux que représentent les empreintes de Zakro, j'ai identifié huit empreintes de bagues. Cinq autres sont peut-être issus sans qu'on puisse l'affirmer avec certitude [43]. J. Weingarten, pour sa part, en a reconnnu une dixaine [44].

Les scellés de Zakro représentent, d'une manière générale, les mêmes catégories que ceux à H. Triada. Retenant uniquement les spécimens issus des bagues dont l'état est satisfaisant, nous avons pu reconnaître dans la catégorie B des 'pinched' [45] avec traces de fils sur l'une des faces, et des petites plaquettes ovales [46] et dans la catégorie C des prisme percés d'un trou longitudinal [47]. Le 'pinched' semble l'emporter quantitativement sur le prisme qui, au contraire, domine à H. Triada; viennent ensuite les petites plaquettes ovales; les nodules autonomes, en revanche, sont absents.

Le répertoire iconographique des bagues comporte des scènes religieuses, et des scènes de tauromachie. Quant aux figures de monstres, qui font la particularité de cet ensemble, elles ne sont pas représentés sur les bagues.

Le répertoire iconographique, d'une part, le système d'estampillage, de l'autre, imposent le partage du matériel de Zakro en deux groupes. J. Weingarten a, en effet, identifié deux

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41 M. Pope, op.cit. (ci-dessus n. 33) 205.

42 Levi, H.T. nº 25 (oisaux volants) et nº 74 (gazelle et lion au galop volant).

43 Liste des empreintes de bagues: Hogarth, empreintes issues de bagues sûres nºs 1. 3. 6. 9. 10. 11. 97. 98; douteuses nºs 13. 96. 98. 102. 105.

44 Weingarten, Zakro Master A/16 Appendix/Table 5.

45 Hogarth nºs 1. 3+102. 6a. 10a+97a.

46 Hogarth nºs 6b. 9. 195.

47 Hogarth nºs 10b. 11.

modes d'estampillage: a) le 'Single Sealing Système' (SSS), dans lequel chaque nodule porte une empreinte; et b) le 'Multiple Sealing System' (MSS), dans lequel chaque nodule présente deux ou trois empreintes. Ces deux modes d'estampillage répondaient sans doute à deux fonctions différentes que J. Weingarten a tenté de définir [48]. Je me contente de signaler que l'existence de ces deux modes d'estampillage est confirmé par le fait que les empreintes de bagues et de gemmes du système MSS sont estampillées surtout sur des nodules en forme de plaquettes ou sur des nodules informes à trois faces, tandis que les empreintes du système SSS sont estampillées, en majorité, sur des nodules de la catégorie C, suspendus par une ficelle.

Le faible pourcentage de bagues (sur les deux-cents sceaux, on ne compte qu'une dizaine de bagues) ne nous étonne guère: les figures hybrides, qui dominent très largement dans le groupe de Zakro, sont exclues du répertoire de bagues, comme nous l'avons signalé. A une exception près (trente-sept nodules du système MSS portent les empreintes des bagues n°s 10 et 97), le nombre d'empreintes issues d'une bague est limité [49]. Ce dernier fait s'explique si nous acceptons que chaque gemme a estampillé un produit expédié à Zakro par un fournisseur installé en dehors du Palais. Quant aux trente-sept nodules [50] elles semblent avoir été estampillées avec le même sceau par une autorité qui a contrôlé les produits importés. Quoi qu'il en soit, les scellés de la Maison A de Zakro apparaissent plutôt comme des nodules décachetés et reservés provisoirement dans un débarras, peut-être, jusqu'au contrôle définitif. Rien ne nous permet d'affirmer qu'il s'agit d'un depôt d'archives. Les empreintes de la Maison A ont été trouvées avec de la céramique et, des d'objets en métal, mais aucun objet n'indique la présence d'archives, exception faite d'une tablette inscrite et d'une rondelle. Ce qui précède nous permet d'entrevoir des différences entre le matériel de Zakro et celui d'H. Triada, en dépit de la similitude des types de scellés.

Le groupe de Chania (fouille de J. Papapostolou à Kastelli) [51], numériquement limité en nombre (environ cinq-cents-cinquante empreintes sur cent-quatre-vingt-dix-neuf scellés cachetés par trente-deux sceaux), a cependant l'avantage de provenir d'archives, selon le fouilleur, et partant, de nous servir de modèle d'archives minoennes. Le fait d'avoir été trouvé *in situ* nous permet par ailleurs de saisir la logique de son organisation qui paraît cohérente.

L'identification des bagues-cachets ne pose aucun problème. Je me range à l'avis du fouilleur en ce qui concerne l'attribution de certaines empreintes à des bagues [52], sauf pour l'empreinte n° 28 de sa liste [53]. La présence considérable des bagues (parmi les trente-deux

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48 Weingarten, Zakro Master 7 «there is virtually no overlap between these types appearing in the SSS and those appearing in the MSS. Thus, with but one exception, the 93...».

49 Sept bagues (Hogarth n°s 1. 3. 9. 11. 96. 98. 102) sont représentées par une seule empreinte, deux autres (Hogarth n°s 6 et 105) sont représentées par deux empreintes chacune.

50 Ces nodules portent chacune les empreintes n°s 10 et 97.

51 Papapostolou, Sphragismata

52 Ibid. n°s 1. 2. 9. 10. 27. 29–32. Encore quatre empreintes provenant des fouilles ulterieures et publiées dans CMS V Suppl. 1A n°s 133. 137. 142. 145 sont considerées comme étant issues des bagues. Je ne les inclue pas dans la liste n'appartennant pas au groupe précis.

53 Les excellentes photos du CMS V Suppl. 1A n° 176, attestent un contour circulaire de gemme.

sceaux les neuf étaient des bagues) pourrait s'expliquer par le fait que la pièce qui nous les a livré était un dépôt d'archives. Le groupe de Chania se distingue des groupes précédents non seulement par la forte présence de bagues, mais aussi par la standardisation des scellés (plaquette, rondelle, prisme-fusiforme). Cinquante empreintes issues de cinq bagues sont apposées sur des plaquettes et présentent des traces de ficelles au revers (catégorie B). Seules trois gemmes ont cacheté ces scellés de dix empreintes [54]. Sur huit médaillons trente-six empreintes issues de trois bagues ont été apposées et sur presque cent médaillons quatre-cents-trente-sept empreintes issues de quinze gemmes [55]. Une seule bague a estampillé un scellé prismatique avec trou au sommet (catégorie C), et huit gemmes ont cacheté vingt-cinq scellés du type prismatique [56]. Le nombre de bagues qui ont servi à cacheter les documents est le plus élévé quand il s'agit de plaquettes (cinq) que de rondelles (trois). Quant aux prismes, un seul porte une empreinte de bague. Pour les gemmes, c'est l'inverse. Trois ont été apposées sur les plaquettes, douze sur les rondelles et huit sur les prismes. On remarquera aussi la prédilection de certaines bagues pour certains types des scellés, p.ex. la bague qui a cachetté les plaquettes ne cachette ni les rondelles, ni les prismes. Cette constatation ne vaut pas pour les gemmes, du moins dans la même mesure. Que les plaquettes aient été estampillées surtout par des bagues montre que les objets qu'elles cachetaient étaient de la responsabilité des haut fonctionaires. J. Papapostolou pense que les plaquettes servaient à cacheter des coffrets remplis de tablettes [57]. Etant donné l'importance des tablettes pour l'administration, il est naturel qu'elles aient été placés sous le contrôle d'un haut dignitaire. Quant aux rondelles, E. Hallager les identifie à des récépissés de produits ou de services rendus au centre administratif par des gens de la région [58]. Si l'on accepte que plusieurs personnes sont impliquées dans des telles transactions, le nombre élévé de rondelles est tout à fait normal, de même que la présence limitée des bagues, dès lors que les transactions se faisaient à un niveau subalterne. Quant au scellé prismatique estampillé par une bague, nous pouvons supposer qu'il cachetait un rouleau de papyrus comportant plusieurs feuilles sur lesquelles figuraint les inventaires de l'archive. Huit gemmes ont estampillé vingt-cinq scellés prismatiques qui cachetaient peut-être des rouleaux de papyrus de moindre importance, ou, plus vraisemblablement, qui jouaient le rôle d'étiquettes. Si j'entrevois la logique de l'organisation de ces archives, en revanche les détails sont difficiles à saisir. La standardisation des types semble avoir été conditionnée par leur fonction. Ont-ils suprimé le type 'pinched' quand on s'est aperçu que la rondelle pouvait servir à des transactions plus compliquées?

Le répertoire iconographique comporte un pourcentage élevé de scènes de culte. Le nombre des scènes inspirées de la nature est important.

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54 Papapostolou, Sphragismata 158sq.
55 Papapostolou, Sphragismata 160sq.
56 Papapostolou, Sphragismata 157.
57 Papapostolou, Sphragismata 20.
58 Hallager dans: ASSA 64.

Le objectif que je me suis imposé, à savoir la fonction de la bague et les rôles respectifs du sceau en pierre et de la bague-cachet ne saurait être atteinte en se fondant sur la documentation minoenne disponible.

Nous nous tournons vers le continent grec, où la fouille systematique de Pylos nous permet, en effet, de mieux saisir le rapport quantitatif et topographique entre les empreintes de gemmes et les empreintes de bagues trouvées in situ. Nous possédons également des informations sur l'usage des pièces où ont été trouvées les empreintes et, partant, nous sommes en mesure de formuler des hypothèses sur le rôle des sceaux. Dans le 'Main Building', des empreintes ont été trouvées dans les pièces 7 et 8 qui sont identifiées aux archives. En dehors du 'Main-building' les pièces qui ont livré des empreintes sont des dépôts d'ateliers (95—100), un magasin de vin (104, 105). Par ailleurs, à une esplanade située entre le 'Main Building' (dont elle borde le côté sud-ouest) et les salles 64—65 ont été trouvées des empreintes, loin de leur place initiale.

Seules des scellés de la catégorie C ont été trouvés à Pylos. Ils se présentent sous la forme de prisme souvent fusiforme et de 'pinched', deux variantes du même type semble-t-il. Traversé par une ficelle, le prisme était apparemment destiné à des objets plus ou moins volumineux, tandis que le 'pinched', qui conserve des traces de fils, aurait cacheté des objets de petites dimensions. Le matériel disponible ne permet pas toujours de faire aisement la distinction entre le prisme et le 'pinched', car la personne qui travaillait l'argile ne portait pas une grande attention au modelage de la forme. L'absence de scellés de la catégorie A laisse supposer qu'ils furent remplacés par des tablettes inscrites. Le developpement de l'écriture ne pouvait pas ne pas avoir de repercussions sur l'usage des scellés.

Distribution des scellés dans le palais

1. Les archives (pièces 7 et 8) ont livré les empreintes de cinq bagues et de deux gemmes [59]. Les empreintes de trois autres gemmes ont été trouvées à proximité de ces pièces. Les bagues et une des gemme étaient estampillées sur des nodules de type prismatique informe, percés d'un large trou. Des cinq gemmes, trois furent apposées sur un scellé prismatique; pour les deux autres le type du scellé reste imprécis.

Les gravures des bagues représentaient des scènes copiées, sans doute, de fresques: scènes de combat entre hommes ou entre hommes et animaux, scènes de tauromachie et composition emblématique avec quatre griffons. Les sujets des cachets en pierre étaient des compositions courantes, d'un travail remarquable, figurant des animaux.

2. Les dépôts d'ateliers (pièces 95—100) de l'ensemble du 'North Eastern Building' [60] ont livré des empreintes des bagues et des gemmes. Quatre d'entre elles proviennent sans aucun

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[59] Blegen, PN I 92sq. (Room nº 7). 95 (Room nº 8). Pour les empreintes voir CMS I nos 302. 304–307 (bagues). 303. 308 (gemmes). Pour les empreintes au voisinage des archives voir CMS I nos 309. 310. 311. Le type est imprécis à cause de leur état de conservation.

[60] Blegen, PN I 309sq.

doute de bagues, pour la cinquième le doute est permis [61]. Elles sont estampillées sur des prismes, certains informes, et d'autres proches du 'pinched'. Les empreintes d'une même bague étaient traversées par une ficelle ou un fil. Tout cela prouve que la forme n'était pas très rigoureuse et qu'elle dépendait de l'objet qu'il cachetait le nodule et de l'état d'esprit de celui qui la modelait. Les dix huit gemmes des dépôts ont été estampillés sur des prismes et sont, comme les bagues, tantôt informes tantôt proches du 'pinched' [62]. Les 'pinched' se distinguent cependant par de miniscules trous. Certaines fois le trou est absent ou alors le fil était si fin qu'il n'a laissé aucune trace. Le nombre d'empreintes de chaque bague est limité, sauf pour une dont on possède neuf spécimens [63]. Parmi les empreintes de gemmes, deux spécimens décorés de larges compositions [64] n'ont rien à envier aux bagues sur le plan de la qualité; l'une a réalisé quatre empreintes et l'autre sept [65]. Les dix-huit autres n'ont donné chacune qu'une seule empreinte à l'exception de deux gemmes reproduites chacune sur deux empreintes.

3. La fouille du bâtiment consideré comme 'Wine Magazine' [66] a mis au jour un nombre considérable d'empreintes, dans les deux pièces, le vestibule et la pièce principale. La plupart sont très fragmentaires, et l'identification du type du nodule et du motif de la gravure est souvent problématique. Presque toutes ont été estampillées sur un argile jaune-rougeâtre, différent de l'argile des autres scellés du palais. Deux empreintes très endomagées, trouvées dans le vestibule, semblent provenir de bagues, comme le prouve leurs contours [67]. On peut attribuer trois autres, décorées du motif du maître des animaux, à une bague, à la faveur de la base pointillée [68]. Sept empreintes, provenant du vestibule, semblent issues des gemmes [69]. Le magasin proprement dit a livré deux nodules d'une seule bague [70] et des empreintes de vingt-trois gemmes [71]. Les scellés estampillés de bagues et des gemmes dont le type est ligible présentent la forme de 'pinched' [72]. Les autres spécimens, très endommagés (surtout au revers), sont traversés par un gros fil. Je crois qu'il s'agit également de 'pinched', sans exclure toutefois l'éventualité des quelques prismes. Les empreintes de l'ensemble du magasin de vin semblent constituer un groupe homogène: ils reproduisent le même type des nodules, sont tous de petite taille, et leur répertoire iconographique se compose en majorité de scènes du monde animal. On y trouve également le motif de la maîtresse (CMS I n° 344) et du maître des animaux (CMS I n° 356, trois spécimens) et une scène de culte (CMS I n°

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61 CMS I nos 312. 313. 324. 331. Le no 320, bien que ni le motif ni le travail ne témoigne d'une bague, la forme ovale nous oblige à la classer parmi les bagues probables.

62 CMS I nos 312 – 323. 325 – 330.

63 La bague CMS I no 312.

64 CMS I nos 323. 329.

65 CMS I nos 327. 367.

66 Blegen, PN I 342sq. (pièces 104. 105).

67 CMS I nos 338. 340.

68 CMS I no 356 (trois spécimens).

69 CMS I nos 337. 339. 341. 343. 344. 357. 360.

70 CMS I no 361 (deux spécimens).

71 CMS I nos 332 – 336. 342. 345 – 350 (pinched). 351 – 355. 358. 359. 362 – 365.

72 CMS I nos 335. 350. 355. 362. 363.

361 deux spécimens). Quant aux vingt-trois gemmes elles n'ont été reproduites chacune que sur un seul spécimen, à l'exeption de quatre d'entre elles reproduites sur deux ou trois spécimens [73].

4. Onze empreintes [74] ont été trouvées dispersées à l'ouest du 'S-W Building' et près de la salle 65. Selon les fouilleurs, elles proviennent peut-être d'un dépôt d'archive, puisque elles ont été trouvées mêlées à des tablettes en Linéaire B [75]. Cette hypothèse semble confirmée par la qualité des onze empreintes. Trois d'entre elles au moins sont issues de bagues et sont décorées de compositions monumentales (CMS I n°s 370. 374. 379). Les nodules sur lesquels ont été estampillées ces bagues sont des 'pinched' ou des prismes. Le matériel était dispercé: aussi le contexte de cette trouvaille nous est-il inconnu. On peut tout au plus supposer qu'une parti des empreintes provient des archives du 'S-W Building', comme nous avons vu plus haut. L'examen des empreintes de Pylos nous permet de formuler les conclusions suivantes:

1. La coëxistence des empreintes de bagues avec des empreintes de gemmes dans les dépôts des ateliers et des magasins suggère une complémentarité. Dans les archives du 'Main Building', les empreintes de bagues sont plus nombreuses des celles qui proviennent de gemmes, et leurs nodules sont généralement des prismes informes traversés par d'épaisses ficelles qui, vraisemblablement, servait à emballer de gros paquets contenant des tablettes inscrites, comme c'était le cas à Chania. Ces documents seraient du ressort des hauts fonctionnaires et seraient cachetés par des bagues. Les empreintes de deux gemmes présentes dans les archives sont à attribuer à un personnel subalterne, chargé sans doute du classement des documents. Le grand nombre d'empreintes de bagues fournies par les archives du 'Main-Building', et leur qualité exceptionnelle témoignent de l'importance du bâtiment. Peut-être faut-il y voir l'endroit où reside le pouvoir car ni la salle du thrône ni les pièces voisines n'ont livré de scellés. Ces archives conservaient très probablement les documents de l'administration centrale, autrement dit les bilans économiques et administratifs.

L'ensemble des ateliers (pièces 96—100) et le magasin du vin (pièces 104, 105), liés à la production, ont livré, à l'envers des archives, un nombre éléve d'empreintes de gemmes alors que le nombre d'empreinte de bagues est limité. Ces bagues, de même que les gemmes de grande qualité, appartiendraient aux hauts fonctionaires du palais chargés du contrôle final des marchandises. Les gemmes ordinaires n'ont généralemant été reproduit qu'à un seul spécimen. Aussi possédons-nous grande variété d'empreintes. On suppose que les empreintes étaient apposées sur des colis par les fournisseurs avant que ceci soient expediés au palais. Chaque fournisseur aurait eu son propre cachet, d'où la profusion des types. En revanche, le nombre des colis expédiés par chaque fournisseur était limité, ce qui explique le petit nombre des spécimens d'une même empreinte. Par la suite, les scellés des fournisseurs, après avoir été decachetés, auraient été rassemblés par un haut fonctionaire dans un paquet sur lequel il apposait son cachet pour certifier l'entrée de marchandises dans les ateliers. Au magasin du

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73 Bagues: CMS I n° 356 (3 spécimens). 361 (2 spécimens). Gemmes: CMS I n°s 332 et 335 (3 spécimens). 354 (2 spécimens). 358 (2 specimens).

74 CMS I n°s 370–375. 377–381.

75 Blegen, PN I 283.

vin, comme aux ateliers, le haut fonctionaire réunissait les scellés et assurait l'entré du vin au palais en apposant son cachet.

A l'inverse des groupes minoens, le repertoire de Pylos comporte peu de scènes religieuses. Faut-il en déduire que le pouvoir en Grèce continental n'etait pas théocratique?

En conclusion: L'évolution des types des scellés indique une standardisation progressive et, partant, une réduction des variantes qui finissent par se limiter à la categorie C. Les spécimens de la catégorie A et B disparaissent. Est-ce dû à un changement d'organisation dans l'administration ou un changement à la suite d'une plus large utilisation de l'écriture?

INTERACTIONS BETWEEN AEGEAN SEALS AND OTHER MINOAN-MYCENAEAN ART FORMS

JOHN G. YOUNGER

Most scholars use seals as comparanda, especially when discussing iconography. But few have commented on their monumentality or on their ability to influence other media, both in sculpture and painting. [1] Besides discussing iconography and iconographic similarities across media, this survey will focus on the two aspects that are specific to seals: their function to create imprints or impressions and their intaglio technique.

From early on, Aegean seals were used to impress or imprint patterns. In the Neolithic period, Aegean seals belonged to a broad koinê of shapes and motifs that stretched from central Europe to the Near East. [2] These stamps performed decorative functions; their deeply carved, geometric designs usually of an *en rapport* or wall-paper type, often unbounded by any periphery line, seem ideal for stamping designs on the flesh, on pottery, and on textiles; for this reason they are called 'pintaderas'.

From painted Neolithic and Cycladic figurines, [3] it seems certain that the peoples of the Aegean decorated their faces with meanders, hatching, and spirals — it is possible that this practice continued into the Late Bronze Age, as well. [4]

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* I wish to thank Paul Rehak for valuable suggestions and comments; I am also indebted to Ingo Pini for illustrations from the CMS archives (Figs. 1–5. 7. 8. 11).

In the introduction to CMS Beih. 4, XIIf., I pointed out one area that still needs attention: the artistic interaction between sealstones and other Minoan-Mycenaean art forms; this paper is an attempt to address that concern.

Abbreviations:

ChT	Chamber Tomb
HMm	Heraklion Museum, precious metal inventory no.
HMs	Heraklion Museum, sealing inventory no.
NMA	National Museum Athens, inventory no.
ShGr	Shaft Grave

1 R.A. Higgins, CIR 30, 1980, 161: "In spite of (seal-engraving's) small scale, this was the great Minoan art ..."

2 J. Makkay, Early Stamp Seals in South-East Europe (1984). J.G. Younger in: Πεπραγμένα του Ζ' Διεθνές Συνεδρίου Προϊστορικού Αιγαίου, Athens, 30 August–5 September 1987 (forthcoming).

3 For painted designs on Neolithic figurines, see L.E. Talalay, Neolithic Figurines of Southern Greece: Their Form and Function (PhD dissertation, Indiana University; UMI 8321396) 161ff., esp. 166ff. For painted Cycladic figurines, see P. Getz-Preziosi – S.S. Weinberg, AntK 13, 1970, 4ff.

4 Terracotta statuettes from the sanctuaries at Mycenae and Tiryns: Hägg – Marinatos, SC 54 Fig. 6; 176 Figs. 8. 9; the plaster female head from Mycenae: Marinatos – Hirmer,CaM color Pls. XLI. XLII.

Many Neolithic pots carry meander designs like those on the pintaderas, and others, like a jar from Dimini, [5] feature a spiral in a reserved tondo, as if stamped by a pintadera.

Seals as stamps continue to impress pottery from EBA II into the Middle Bronze Age; but the practice seems to have been rare in the Late Bronze Age. [6]

It is possible, however, that the main function of the early stamps was to imprint designs on cloth. Their geometric patterns (rectilinear zig-zags, meanders, diamonds, triangles, cruciforms; and curvilinear spirals and concentric circles) are those that could easily be woven into cloth; [7] and it is quite likely that these stamps were used to imprint these designs as an easy alternative to weaving them.

Fig. 1 CMS V,1 No. 111.

Most of the Lerna sealings carry designs in so many 'look-alike' versions [8] of weave patterns *(Fig. 1)* that they must have been important; the earliest lions on the dentine cylinders [9] have the kind of angular profile, hatched manes, and occasionally contorted

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5 Hood, APG 30 Fig. 3.

6 EBA II impressed pottery: e.g., CMS V,1 Nos. 52 from Lerna and 467. 475 from Ayia Irini, Keos; rolled pithoi: e.g., CMS V,1 Nos. 120–148 from Lerna and 529–571 from Tiryns; and stamped hearth rims: e.g., CMS V,1 Nos. 149 from Lerna, Nos. 451–459. 461–466. 468–474. 476–478, and many inventoried pieces with Kerbschnitt, all from Ayia Irini, Keos. MH/MC pottery: J.G. Younger, Hydra 8, 1991, 35ff. with catalogue. For an impressed MM pithos from Knossos: see Evans, PM I 564 Fig. 410 (broken architectonic seal). A LBA I jug from Ayia Irini is of local clay and carries an applied raised boss of clay which a lentoid impressed with a lion (CMS V Suppl. 1A No. 343).

7 E.J.W. Barber, Prehistoric Textiles (1991) 175. 226 with n. 3; cf. CMS V,2 No. 693 (step-design) with Barber 143 Fig. 4,21.6 and CMS V,2 Nos. 706. 708 (zig-zags) with Barber Fig. 4,21.5.

8 The term 'look-alike' comes both from Weingarten, Zakro Master and Weingarten, SSMC I 279ff., esp. 289ff.; and from I. Pini, AA 1983, 559ff. Compare Lerna sealings CMS V,1 Nos. 50 with 56–64; 54 with 55. 68; 53 with 65. 66; 69 with 70; 74 with 75; 76 with 78; 82 (and 80) with 466 (Ayia Irini); 91 with 92; 94 with 95; 100 with 101. 462 (Ayia Irini); 104 with 105–108.

9 Yule, ECS 208f.: 'The Parading Lions/Spiral Complex', and motifs 7.5 (CMS II,1 Nos. 295b. 252a); 7.6 (CMS II,1 Nos. 3a. 52a. 223a. 248a. 251a. 312a; II,5 No. 281; Sakellariou, CollGiam Pl. XVI,45a); 7.7 (CMS II,1 Nos. 249. 250a); 7.8 (CMS II,1 No. 336a).

bodies that would have made attractive border or hem designs; [10] terracotta conoid stamps from EBA and MBA contexts seem to continue the pintadera tradition; and modern wood stamps (σταμπωτά) are still used today to impress designs on cloth throughout Greece and the eastern Mediterranean. [11]

The question arises: at Lerna, when stamps were needed to impress sealings why were they adapted from cloth stamps like the pintaderas? Since such stamps with weave-like patterns continued to be used for impressing sealings at MM II Phaistos [12] and contemporary sites in Anatolia, [13] it is possible that these textile patterns were thought appropriate for reflecting administration because they incorporated designs from special costumes, say those of the administrative elite. Such a situation may explain the curious sealing CMS II,5 No. 327 from Phaistos, which was impressed by a wad of cloth.

After the Phaistos sealing deposit, textiles seem to influence seals less dramatically, although it is possible that many of the designs called Architectonic might continue to derive from woven patterns. [14] But by the Late Bronze Age textile influence seems restricted to friezes of decorative figures like shells, nautili, figure-8 shields, and spirals on metal objects (rings, jewelry, and bronzes). [15]

That seals enjoy a close relationship with jewelry is obvious: seals are themselves beads, items of jewelry worn on bracelets and necklaces. For a brief time (EM III–MM I/II), seals in soft materials (dentines, ivory, and glazed steatite) [16] even take on sculpted shapes (human feet and animal hooves, duck-head stamps, crouching monkeys, etc.), and many of these forms we also see in jewelry. [17] For a brief time after the introduction of the horizontal bow drill (MM II; see below for a more detailed discussion), a few zoomorphic seals were carved

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10 See Barber (supra n. 7) 320ff. for representational patterns on Minoan dress.

11 I am grateful to Harriet Blitzer for an interesting discussion on recent developments in cloth-stamping in central Greece.

12 J. Weingarten in: ASSA 105ff.

13 Cf. CMS V,1 No. 111 with CMS II,5 Nos. 162. 163. 166; CMS V,1 No. 112 with CMS II,5 Nos. 87. 93–96; and CMS V,1 No. 100. 101 with CMS II,5 No. 104, etc. On Lerna/Phaistos: A. Xenaki-Sakellariou, KretChron 15/16, 1961/1962, I, 79ff. (on chronology); M. Heath-Wiencke in: CMS Beih. 0, 149ff. (on composition). On Karahöyük/Phaistos: Alp, ZSK 275 ff. And on all three sites: F. Matz in: CMS Beih. 0, 58ff.

14 Architectonic designs (e.g., Knossos sealings: Gill, KSPI Vc, L8) may imitate simple weaves; and seals that carry animals against a hatched background may be inspired by decorated hems (e.g., CMS XII No. 136 and HM No. unknown from Kamilari [ASAtene 39/40, 1961/62, 7ff. No. 16 Figs. 125. 142]; and Knossos sealings HMs 134 [Gill, KSPI Pe], and 167 [Gill, KSPI K8]).

15 As dadoes on rings: murex shells below figure-8 shields (HMs 266 [Gill, KSPI R22]); double nautili below spirals (CMS I No. 329); spirals: Younger, Iconography 322, Dado 9. In jewelry: see Sakellariou, ThTM 292ff. (for a general typology of beads from the tombs), especially types 113–115 (murex shells), and 117, 118 (nautili and double nautili). On the rims of bronze vessels: see E.N. Davis, The Vapheio Cups and Aegean Gold and Silver Ware (1977) Nos. 107. 129. 137 (murex shells); 131 (nautili); 112 (spirals/snails), etc.

16 Yule, ECS Shapes 33a–l; much of this material appears in CMS II,1. For dentine seals see O. Krzyszkowska in: CMS Beih. 3, 111ff.; and for glazed steatite see H. Hughes-Brock in: CMS Beih. 3, 79ff.

17 Compare early dress pins with zoomorphic finials (Hood, APG 191 Fig. 187) with duck-head stamps (e.g., CMS II,1 Nos. 209. 213. 216 from Lenda); the gold bird bead from the Aigina treasure (R. Higgins, BSA 52, 1957, Pl. 15f.) with the ivory fly stamp, CMS II,1 No. 379; and gold crouching lion beads like HMm 124 from the Ayia Triada tholos (Marinatos – Hirmer, CaM Pl. 110 below) with stamp seals like CMS IV No. 7D.

out of harder stones (e.g., CMS II,2 No. 17 a cat's paw of rock crystal carrying lines and striations), but jewelry in zoomorphic shapes continues well into the Late Bronze Age. [18]

As intaglios, seals are meant to produce impressions, a type of relief sculpture. And these impressions are produced even as the subject on the seal's face takes shape, for intaglio sculptors, as they work, take impressions as they proceed, myself included when I try sculpting seals. And these, in clay, could have provided the inspiration for appliqués for MM II–III plastic relief vases. [19]

Fig. 2 HMm 1034. Ring from Sellopoulo.

Fig. 3 CMS XII No. 262. Mould for glass seals.

Since intaglio seals, therefore, can reproduce their designs in relief, we would expect seals to inspire other impression-producing intaglios. Finger-rings *(Fig. 2)* [20] perhaps come first to mind — many of them have at least some of their motif cast in intaglio moulds [21] along with bezel and hoop.

And then there are glass seals, [22] a mould for which is extant (CMS XII No. 262; *Fig. 3*) [23] and whose contorted bulls have brothers and sisters that come from the Medeon

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18 J.G. Younger in: Eikon 257ff., esp. 266 with n. 26. For a general typology of LH zoomorphic beads, see Sakellariou (supra n. 15), esp. octopus type 116, argonauts 117ff., and butterfly 131.

19 K.P. Foster, SIMA 64 (1982).

20 The earliest surviving metal ring with engraved bezel seems to be CMS V Suppl. 1A No. 45 from Gerontomouri, Lasithi; others are attested among the Phaistos sealings (J.G. Younger, review of Yule, ECS, GGA 240, 1988, 188ff., esp. 207ff.; compare CMS II,5 No. 8 with the Gerontomouri ring).

21 J.A. Sakellarakis in: CMS Beih. 1, 167ff.; A. Xenaki-Sakellariou in: CMS Beih. 3, 323ff. For rings that had much of their motifs cast: CMS I No. 91; V,2 No. 336.

22 T.E. Haevernick, Archaeology 16, 1963, 190ff., and ead., BJb 178, 1978, 111ff.: glass was introduced into the Aegean in the early 16th century.

23 The mould CMS XII No. 262c has a vertical groove running through it and looks pinched above and below. The groove would probably have received a pin for forming the stringhole in the liquid glass; the pinching resulted from wear around the top and bottom of the groove where the cooled seal would have been pried loose from the mould. See CMS V,2 No. 598, an extant glass lentoid from Mycenae, House with the Idols, with the same pinching.

cemetery (CMS V,2 Nos. 348, etc., V Suppl. 1A No. 82, etc., LH IIIB/C contexts) and elsewhere.

We expect, therefore, to see intimate connections between seals and other mould-related objects, not only repoussé like the contorted animals on the gold box from Mycenae ShGr IV [24] that look like those on the Medeon glass seals, but also mould-produced, like the nanny suckling her kid on faience plaques from the Knossos Temple Repositories, a scene that resembles other nursing scenes on seals. [25]

As an art form, therefore, seals fuse two aspects, intaglio and relief.

Scholars today tend to see a conceptual difference between intaglio and relief and consequently several have debated whether seals were meant to be appreciated from the stone itself or from its impression. [26]

But the difference between intaglio and relief was probably not an issue to those who created, wore, and used seals. While many seals were undoubtedly worn as amulets, the intaglio aspect of their designs insured that in fact they were always a functional item: to produce relief impressions. Consequently, the purpose of seals always depended on their inherent duality: intaglios that produce relief.

One curious object in the Ashmolean Museum [27] illustrates this fusion; it is a trapezoidal chunk of steatite with a tondo face on the upper surface carrying a cow suckling her calf in intaglio. Kenna thought it an unfinished seal, but sculptors never begin the seal face before they finish the seal's shape. [28] Instead, the intaglio face could have functioned as a mould for

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[24] NMA 808–811: Marinatos – Hirmer, CaM Pls. 198. 199 below; J.G. Younger, Kadmos 22, 1983, 109ff., esp. 50ff. I. Pini, JRGZM 28 (1981) 48ff., prefers to date the manufacture of the Medeon glass seals closer to their context dates because of their conical backs, a typical – but not exclusive – feature of Spectacle-Eye seals, many of which impressed Knossos sealings in spite of Pini's complaint (SMEA 28, 1990, 116) that conical backs hurt the fingers.

[25] E.g., the mother animals suckling their young: K.P. Foster, Aegean Faience of the Bronze Age (1979) 89ff. Compare similar scenes on seals: Younger, Iconography 70ff.

[26] H. Biesantz, Kretisch-mykenische Siegelbilder (1954) 51ff.: seals are designed to be seen in the original; I. Pini in: CMS Beih. 3, 201ff.: some seals were meant to be read from the original and some from impression.

Some impressing stamps carry their designs in relief: e.g., CMS II,1 Nos. 196b. 202. 203; V,2 Nos. 462. 467. 476. Hieroglyphic seals occasionally are ambivalent about which way the inscription reads (see n. 33 infra), e.g., CMS XI No. 299a (Evans, SM I 184 No. 11, fronds; 198f. No. 44); CMS II,2 No. 296a (Evans, SM I 184 No. 11; 198f. No. 44; 206 No. 62), as if HAT on the seal would read just as sensibly as TAH in its impression (such ambivalence in reading direction finds parallels in archaic boustrophedon inscriptions). Another bemusing example concerns inscriptions that wrap themselves over two faces of a seal, like a/ja-sa-sa-ra[-me] (assuming this is one word and we can read it) on CMS II,1 Nos. 393. 394; II,2 No. 217; VII No. 35 (over two registers on one face); and Kenna, CS Nos. 95 and 96.

On many seals the subject on the seal face takes into account the colors and veins of the stone itself whose significance is lost in impression (e.g., the owl placed in the [later?] burnt corner of Kenna, CS No. 220b [M.A.V. Gill in: CMS Beih. 1, 83ff., esp. 88]; and the rippling veins of CMS XII No. 263 contribute to the sense of the moving calves). On the other hand, other sealstones are so translucent that the motif is virtually undetectable until it receives an impression (cf. CMS V,2 Nos. 499. 500 and a similar lentoid from Phylakopi [C. Renfrew, The Archaeology of Cult (1985) 281 No. 2], all cut from the same chunk of white limestone).

[27] AM 1938.1087 published in: J.G. Younger, BSA 74, 1979, 258ff.

[28] J.G. Younger, Expedition 23.4, 1981, 31ff.

gold foil that could have been used to provide the obverse face of a gold lentoid like the one in the Benaki Museum (CMS V,1 No. 200).

In iconography, however, the greatest contribution of seals is the direct result of their small size — seals as miniature sculptures must focus on the simple image, which, to be at its most interesting, is taken from nature. The Mallia Workshop [29] seems to have been the first to have exploited these simple naturalistic images. It produced over 530 extant seals, most of which are three-sided prisms whose faces usually carry a single image, [30] e.g., CMS XII No. 44a) person to left; b) dog? runs left; c) boar stands right.

Some of the more interesting images imply narrative, albeit simple ones: human figures stand saluting, holding objects difficult to identify: 'Bristly Sticks' (e.g., CMS XII No. 18a) or 'Vertical Supports with Globular Attachments' (e.g., CMS XI No. 7a); other figures sit with pots (as potters [e.g., Kenna, CS No. 39b], beer-brewers [e.g., CMS II,2 No. 76], or crab-catchers [e.g., Kenna, CS No. 39c]). [31] One figure sits at a board game (e.g., Kenna, CS No. 38a), possibly Sennet.

The appeal of these simple images is so direct that they have a pictographic quality. And when combined, such simple pictographic images can become legible as hieroglyphic inscriptions.

The connection, I think, is clear: Proto-Palatial seals as bureaucratic, sphragistic tools, impressing sealings in store rooms, are now (early MM) intimately connected with writing; [32] in the Aegean, the earliest appearance of writing in any form is on seals — a stamp with Egyptianizing signs impressed a EC II hearth rim from Ayia Irini (CMS V,2 No. 478), and seals begin carrying hieroglyphic inscriptions from the opening of the Middle Bronze Age (e.g., CMS II,1 Nos. 391—394; Kenna, CS Nos. 95 and 96). I assume therefore that when writing was introduced, seals as bureaucratic tools hastened to refer to it, abandoning their earlier link with cloth and costume. This new alliance explains the switch in the iconography of seals; as if in response to writing's demand for legibility and clarity of

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29 Yule, ECS 212ff. on the Mallia Workshop; also see J.G. Younger, review of Yule, ECS, GGA 240, 1988, 188ff., esp. 201ff. A preliminary catalogue of the Mallia workshop includes 504 seals and 28 sealings, most of which (88%) are three-sided prisms or gables of dark steatite; of these, 68 seals and 13 sealings (total 81, or 15%) carry hieroglyphic inscriptions.

30 G. Walberg, Tradition and Innovation. Essays in Minoan Art (1986), passim, esp. chapters 2 and 3, compares motifs found on seals and pottery. She suggests (p. 18) that seals copy some naturalistic motifs, like the octopus (e.g., CMS II,5 Nos. 301–303), from pottery; but isolated figures are not specific to any one medium. Octopi, for example, appear in any circular or square space: on vases (Marinatos – Hirmer, CaM Pl. 87; LM IB), stone vases (P. Warren, Minoan Stone Vases [1969] 88: HM 254 [Evans, PM II Figs. 130. 307]; and NMA 2490 from Mycenae ChT 26 [B. Kaiser in: CMS Beih. 0, 37ff.], lentoid seals (Younger, Iconography 208–209), gold sequins (NMA 18 [Kaiser, UMR 55: cf. CMS II,5 No. 312]. 39. 40, all from Mycenae ShGr III), and floors (E.S. Hirsch, SIMA 53, 1977, Nos. C4 [from Ayia Triada shrine]. G8. G10. G11 [from Pylos]; G20. G24 [from Tiryns]).

The decorative motifs that appear on both MM II/III pottery and seals may all ultimately derive from textiles.

31 As potters: Evans, PM I 124 about Kenna, CS No. 39b and Evans, PM IV 521 about Kenna, CS No. 38b. More recently: the pots are for brewing beer (H. Katz – F. Maytag, Archaeology 44.4, July/August 1991, 24ff.), or, because of the frequent association of fish with these pots, they are for catching crabs (J. Powell in: Eikon 307ff., esp. 313f.).

32 J.G. Younger in: ASSA 240f.

meaning, [33] the Mallia Workshop prisms developed the simple naturalistic image. If this is so, then the great and earliest influence on the development of narrative comes from writing via seals.

If the narrative quality of the early seals, especially those of the Mallia Workshop, is linked intimately with the development of legible writing, then perhaps it is not surprising that these early focused, narrative images had little artistic influence [34] or found few parallels in those arts, like pots, [35] that had no such functional link to administration and therefore no similar incentive to convey narrative or naturalistic legibility.

Seals only broke free of their dependency on writing when they acquired new tools suitable for exploring their potential for carrying sculpture. The old tools probably consisted basically of gouging instruments and a drill that required the artist to hold it against his chest

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33 Olivier has expressed doubts about the legibility of hieroglyphic seals: J.P. Olivier in: CMS Beih. 1, 105ff.; id. in: ASSA 11ff. There are patterns, however, in the arrangement of inscriptions on the different faces of a single seal; see J.G. Younger, SMEA 28, 1990, 85ff.

34 It is possible that the Pylos fresco of people (symposiasts?) sitting at table (M.L. Lang, The Palace of Nestor at Pylos in Western Messenia II, The Frescoes (1969), 44 H 6) finds immediate sources in the Knossos Campstool fresco (Evans, PM IV color Pl. XXXI) and ultimately in a Mallia Workshop prism; the motif and stilted style seems similar (cf. the man at a board game on Kenna, CS No. 38a, or two men sitting on CMS II,2 No. 241a; VII No. 16a, or Kenna, CS No. 16).

Another Mallia prism may have impressed the Pylos sealing, CMS I No. 369; the three men saluting, the 'ladder', and the gouged style are characteristic of the Mallia Workshop (the dimensions, however, 1.5 x 2.4 cm [for sealing or for impression?], are larger than the usual Mallia prism). Two other Mallia Workshop seals survived into the Late Bronze Age: CMS II,2 No. 262, an olive-green prism found in a LM I olive oil jar at Palaikastro, and CMS V,1 No. 263, a pyramidal stamp from Armenoi T. 38 (LM IIIA2–B1 context).

35 The earliest vase-painting with the human figure seems to be a cup from Palaikastro (R.C. Bosanquet et al., BSA Suppl. 1, [1923] 11, Pl. Va); Walberg, PMMP 61 Motif 25.1 places the cup in her phase 1 (EM III/MM I) but relates the motif to Classical Kamares (MM II) (Walberg, Kamares 69 Motif 26.1). The triangular conception of the figure closely parallels a few human figures on seals in the Border/Leaf Complex (Yule, ECS 209f.; e.g., CMS II,2 No. 204a).

Similar in conception are figures on sherds from Phylakopi (Immerwahr, Aegean Painting 32f. Fig. 11e). Their thin bodies and curly hair resemble the figure and the decorative rosette on the ivory stamp CMS II,1 No. 55 (Yule's Parading Lions/Spiral Complex, Yule, ECS 208f.).

Another person on Classical Kamares pottery is Walberg, Kamares 69 Motif 26.1/Walberg, PMMP 61 Motif 25.1 on an ovoid amphora from Phaistos (Walberg, Kamares 134 Shape 71.11; G. Walberg, Tradition and Innovation (1986) Fig. 4 illustrates the amphora; Immerwahr, Aegean Painting 32 Fig. 11f. presents a drawing of the entire preserved composition). All these angular and energetic figures correspond closely to the gouged figures on Mallia Workshop prisms (e.g., CMS VII No. 6c, and Kenna, CS Nos. 39a and 40b).

Two well-known bowls, one stemmed, from Phaistos (Walberg, Kamares 67ff., pictorialized Motif 25.VI.1–3; Immerwahr, Aegean Painting 33 color Pls. II. III) present women in petaloid dresses that seem to originate from paisley designs. On the bowl, two 'dancing' women bend around and flank another figure consisting of a solid-painted triangular oval outlined with arcs and surmounted by a human head to right. Several scholars have interpreted this scene (Walberg, Kamares 68 and notes [Long: women in hide skirts; Furumark: epiphany of a goddess]; Immerwahr, Aegean Painting 33 agrees with Furumark; G.C. Gesell in: O. Krzyszkowska – L. Nixon (eds.), Minoan Society (1983) 92ff.: "snake goddess by the serpentine loops along her dress" (p. 94); I prefer 'xoanon'). The figures have few parallels on seals: see Kenna, CS No. 78 (Yule, ECS Motif 58.24) and compare CMS II,5 No. 171.

with one hand and bow it with the other [36] – with such tools there is almost no opportunity for delicate and precise modelling of stone.

But towards the end of the Mallia Workshop's life, the horizontal bow-drill was introduced, [37] a tool which freed the artist from holding the seal and bowing the drill at the same time. The principle of the horizontal bow-drill has changed little since MM II; the apprentice has now become electrical and the broad wheel that shapes the stone has become divorced from the drilling bits that model it. But however the drill is turned, by a separate apprentice or by electricity, it turns faster, allowing the artist to sculpt harder materials, agate and cornelian, rock crystal, and various conglomerates and minerals. With freedom of movement, the artist holds the stone up to the rapidly turning bit of the drill, a process that encourages the development of seals with biconvex shapes, the lentoid, amygdaloid, and cushion.

The horizontal bow-drill is solid; by itself it produces dots when the seal is held stationary to it, but, when the seal is moved slightly against it, it models large areas. The drill can also receive attachments: a hollow tip for producing circles when the seal is held perpendicularly to the drill, and arcs when it is held obliquely; a thick wheel for shaping the stone; and a thin wheel for cutting straight lines.

Fig. 4 CMS XIII No. 13D.

The marks of this process are obvious: the early figures are made of straight lines, circles, and dots. We can even see on a single seal (e.g., CMS XIII No. 13D; *Fig. 4*) how the artist drilled out the shoulder and hip, cut the limbs, dotted the features, and then moved the muzzle of this animal back and forth across the small tip of the solid drill to model it, producing striations within the form.

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36 For an illustration of a modern drill operated by one person, see G.L. Possehl, Expedition 23.4, 1981, 39ff., esp. 45 Fig. 11.

37 J. Betts in: CMS Beih. 3, 1ff.; J.G. Younger, Aegaeum 3, 1989, 53ff.

The new tools for sculpting seals cannot have come along by themselves — no technical innovation stands alone. And by late in MM II, early in MM III, we see a veritable explosion in the arts.

Perhaps the most important innovation was fresco painting whose broad wall surface invites opportunities for landscape and narration. Frescoes are, of course, impressive, and it is understandable that many scholars view them as the primary influential art form, even though the narrative seals of the Mallia Workshop precede them.

Hood [38] in "The Arts in Prehistoric Greece" introduces Late Bronze Age seals like this:

"seal-engraving, like other arts, was influenced by wall-paintings and painted reliefs, although their small size and shape made faithful reproduction of fresco scenes on seals difficult if not impossible."

Many seals do reflect fresco, of course; but, on the other hand, many do not; and, besides, it is quite likely that it was seals that influenced many frescoes. [39]

CMS I No. 179, the Tiryns Treasure ring, for instance, combines both glyptic and fresco compositional elements. It carries a seated woman whom four genii face with their usual ewers. The core of the scene, a monster facing a seated woman, occurs on several seals and rings, for example CMS I No. 128 from Mycenae ChT 91. In this particular example, the pose of the seated woman complements the seated pose of the griffin and the bent profiles of each seem to reflect the oval frame surrounding and circumscribing the scene; the two figures seem balanced with respect to each other and tightly locked together by the close-fitting periphery of the bezel. The Tiryns ring, with its taller bezel (W. 3.5 cm) substitutes the taller genius for the griffin and, since its wide bezel demands a proportionately broad length (L. 5.7 cm), the ring multiples the single monster into four, producing a frieze of figures that do indeed seem to step off fresco, [40] although the small fresco fragment from Mycenae (LH I–II? context) with a comparable file of genii [41] is only twice as large (L. 11.5 cm x H. 8.5 cm) as the ring itself.

As soon as wall-fresco is developed, it immediately begins to open the wall up to entire vistas. [42]

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38 Hood, APG 219.

39 Seals have also influenced how we interpret frescoes. CMS II,3 No. 198, published in 1907, very probably influenced E. Gilliéron fils's reconstruction (1926; Evans, PM II 775) of the 'Prince of the Lilies'; given the similar torsos, Gilliéron adopted the seal's trailing arm and general stance for the plaster relief.

40 Processions, like the fresco file of women at Thebes (H. Reusch, Die zeichnerische Rekonstruktion des Frauenfrieses im böotischen Theben [1956]), are ideally suited to wall painting; they convey both the length and direction of a wall and reflect, pari passu, the spectators who walk alongside them. Several seals carry short processions (e.g., CMS XII No. 168).

41 AEphem 1887 Pl. 10,1; W. Lamb, BSA 24, 1919/21, 190; Marinatos – Hirmer, CaM color Pl. XLIII below.

42 Early examples would include: Knossos, House of the Frescoes, rm D with monkeys and bluebirds and rms E–F with agrimia (Immerwahr, Aegean Painting Kn Nos. 2. 3); the Akrotiri West House frescoes with the Nilotic scene and the vignettes of daily life in the Meeting on the Hill (Immerwahr, Aegean Painting Ak No. 12). And for a later example, see the fresco with cat stalking birds in the cramped cubicle 14 at Ayia Triada (Immerwahr, Aegean Painting AT No. 1; M.A.S. Cameron in: Hägg – Marinatos, FMP 320ff. [the color illustration is

In this regard, finger-rings, not seals, are the closest glyptic form to fresco. Many rings, like HMm 989 from Archanes Tholos A and 1034 from Sellopoulo T. 4 *(Fig. 2)* (both LM IIIA1 contexts), [43] carry complex cult scenes, often in an outdoor setting; with objects or figures at the sides flanking a central figure, these scenes exhibit a balance, a principle of symmetry easily accessible on the small ring but appreciable in fresco too. For instance, a fresco from Akrotiri, Xeste 3, carries a seated goddess flanked by attendant monkey and salient griffin; [44] this central scene of a seated Potnia Theron resembles the ring CMS V Suppl. 1B No. 195 preserved in a cast in the British School at Athens. [45] And this central scene has been inserted within another scene from seals, the central woman flanked by two figures (e.g., Kenna, CS No. 295).

A few seals contemporary with the early development of fresco try to imitate their landscapes, presenting expansive scenes, like HMs 126 (Gill, KSPI Pa; Kenna, CS No. 5S) from Knossos, a seal impression depicting a deer lying in a meadow, or like CMS X No. 69, a rare bronze lentoid depicting a fish-filled stream. But these ambitious seals fail.

It is not so much their small size that dooms these landscape seals; it is the lack of frame. Frescoes, when successful, operate like windows in a wall opening up to all outdoors; the frame, that is the boundaries of the wall itself (socles, lintels, bottom and top sole plates), [46] do not limit the murals, but rather themselves present additional areas for paintings, predelle and dadoes. With seals, however, the frame, which is the rim of the seal face, is integral with the medium — as the frame and the reserved background [47] bind the subject and constrain it, they therefore interact with the scene, focus our attention on it, and demand a balance within it. This tension between subject and framing background constitutes the major aesthetic principle of intaglio seals.

On Kenna, CS No. 227, the agrimi in the upper corner and the dog in the lower corner stress the oblique axis, creating a centripetal force that is held in check only by the frame. Frescoes cannot rely on such frames; their scale is too big, their occasions too full of incident, their narrative too sweeping to depend on simple, single, internal tensions. The individual narrative moments on which seals focus become incidents in fresco.

But such incidents on seals take up our entire attention. For instance, a pair of bulls on CMS IV No. 256 *(Fig. 5)* stand in Pose Type 19C, Right, [48] one animal regardant to echo

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reversed]; P. Rehak in: The Function of the Minoan 'Villa' [8th International Symposium, Swedish Institute at Athens, 6–8 June 1992; forthcoming]).

43 For the Archanes ring: J.A. and E. Sakellarakis, Archanes (1991) cover, 72ff. Fig. 54. For the Sellopoulo ring: M.R. Popham, BSA 79, 1974, 217ff. No. J8.

44 For a reconstruction drawing: Marinatos, AaR Fig. 40.

45 The ring, now lost, is said to have come from the Amari plain, Crete, near the Idaean cave: A. Evans, JHS 45, 1925, 66 Fig. 56.

46 The diagram in Immerwahr, Aegean Painting 12 Fig. 4, illustrates how borders refer to construction elements of the wall and how the pictures fill the areas between.

47 Filling motifs, by encroaching on the background, may help reduce its mass and suggest landscape or setting for the subject. Compare, in order of increasing clutter, the following seals in the Jasper Lion Group: CMS X No. 303; XII Nos. 207. 271; V,1 No. 304; XI No. 242; II,3 No. 122 (Younger, Aegean Seals II 109ff., esp. 119f.).

48 Younger, Iconography 75.

the curve of the rim. The pose has no other purpose than to balance the mass of the animals against the reserved background, or to make the regardant turn of the far bull's head echo the curvature of the rim.

Fig. 5 CMS IV No. 256.

Not all seals achieve this balance, however; occasionally a seal lacks tension and its subject ignores the frame. The chaotically arranged birds, for instance, on CMS I No. 151 from Mycenae ChT 518 (LH I–II context) negotiate their space with clumsy difficulty, but in the Spring Fresco at Akrotiri [49] such free-falling birds seem acrobatic. The larger field of the Spring Fresco provides them with room to manoeuvre and time to straighten themselves out, find their wings, and fly right. [50]

If few seals try, and fail, for the narrative sweep of fresco, several early frescoes try, with limited success, for the classical balance inherent in seals. Even though the Antelope Fresco from Akrotiri, [51] for instance, adapts for its animals the same pose PT 19C (see above) from seals, it fails, for there is no frame to constrain it; the wavy boundary above probably only separates painting sessions. [52] A glyptic derivation for the pose of the antelopes thus proves

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49 Sp. Marinatos, Thera IV (1971) 20ff., 49ff., color Pls. A–C, especially the swallows on the West wall in color Pl. C bottom. C. Doumas, The Wall-Paintings of Thera (1992) Pls. 66–76. M.B. Hollinshead, AJA 93, 1989, 339ff., discusses the iconography and archaeological context of the Spring fresco.

50 M. and H. van Effenterre in: Eikon 325ff., distinguish four Aegean ways of representing time. Representing time and implying sequences of events are crucial factors in conveying narrative.

51 Marinatos (supra n. 49) 28ff. 46ff., color Pls. D. F right. Doumas (supra n. 49) Pls. 83. 84.

52 Lang (supra n. 34) 10ff.: "Method 1" (p. 13), a white 'reserved' area receives the outlined figure (in this case, antelopes); vertical and horizontal straight and wavy divisions of color (p. 21f.) correspond to divisions between the work of one time period and another. Immerwahr, Aegean Painting 17, summarizes: "...the changing background color zones characteristic of many Aegean paintings are the likely result of the technical problem of matching colors from one day's work to the next."

more satisfying than a symbolic meaning for it; several scholars, for instance, have suggested that the pose conveyed sexual and programmatic nuance. [53]

When small frescoes are provided with a close-fitting frame, however, some imitate seals successfully, but only to a degree. The Taureador panels from Knossos [54] provide frame and a symmetrical balance of figures and mass that imitate the balance on rings; to have received a completely painterly treatment these bull-leaping scenes should have been placed in some sort of larger outdoors setting like the figures in the Dance in the Grove fresco. [55]

Likewise, the two solitary fisherboys painted each on a narrow moveable panel in the West House at Akrotiri seem cramped; their background is proportionally too small. Each boy would look better if he appeared alone on a sealstone (e.g., CMS VII No. 88, Kenna, CS No. 205). For them to appear comfortable, we must view them together and in a larger context, [56] set in opposite corners, themselves providing the frame for an entire room.

The later Pictorial Vase-Painting is perhaps more successful at copying seal motifs; many pots concentrate on pose and the solitary animal, especially bulls and birds, and almost all enclose these subjects in horizontal bands that provide frames similar to those of seals. And some of these pictorial vases [57] seem to translate graphically, with modelling lines, the plastic modelling of seals, while at least one pot, with three dots at the bull's muzzle, even imitates a technical detail of Almond-Eye seals.

Even the latest frescoes at Pylos could have remembered seals (see n. 34). The individual scenes in the Vestibule and on the south-east wall of the Throne Room, large bulls and diminutive seated pairs of men, could each have come separately from seals, even though the entire composition now seems imperfectly understood. [58]

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53 Apropos the Vapheio Quiet Cup, Evans, PM III 183 n. 1 suggested that lifted cow tails signified sexual receptivity. Sp. Marinatos, Thera IV (1971) 46ff., adopted this suggestion for the pose of the antelopes. W.W. de Grummond, AJA 84, 1980, 335ff., points out, however, that the bull being tethered on the Vapheio Quiet Cup also lifts its tail. Nonetheless, Vermeule – Karageorghis, MPVP 30, apply Evans's suggestion in their discussion of pot IV.32: "The cows' ... tails lifted high (as so often in scenes of the prelude to mating)". Since sex is rarely depicted in Aegean art (there are only three examples: CMS II,1 No. 446a with a man and a woman, and, with agrimia, CMS VII No. 68 and possibly the pot XI.85), it is possible that sex was also rarely implied.

Marinatos, AaR 106, interprets the antelopes as in conflict, thus echoing the pugnacity of the adjacent Boy Boxers.

54 Evans, PM III 212 Fig. 144. Compare the ring CMS I No. 200 and the sealing HMs 250 (Gill, KSPI R8) impressed by a ring. Barber (supra n. 7) 325, suggests that the barred bands, including, presumably, the overlapping half-ovals between them, bordering the Taureador frescoes derive from textiles. Overlapping half-ovals also appear on seals to signify terrain or water (e.g., CMS I Nos. 167. 185?).

55 E. Davis in: Hägg – Marinatos, FMP 157ff., discusses the setting of the Grandstand and Dance frescoes.

56 Marinatos, AaR 37f.

57 The carefully painted bulls on Vermeule – Karageorghis, MPVP VI,1–4 include dappling and modelling lines that seem to translate into paint the sculpted areas of seals; the fuzzy face bucranion on ibid. V,102 finds a close parallel on CMS IV No. 168; the encircled muzzle of bulls like those on ibid. V,46.49.51, etc. could reflect the dot placed on bull muzzles in the Almond- and Dot Eye Groups; and the three circles for the nose and mouth of the bulls on ibid. V,48 seem to be lifted from seals like CMS V,2 No. 433, XII No. 248.

58 Lang (supra n. 34) 38ff. 192f. L.R. McCallum, Decorative Program in the Mycenaean Palace of Pylos: The Megaron Frescoes (PhD dissertation, Pennsylvania University 1987; UMI 8804933), 77ff., presents an odd reconstruction.

But by late LH IIIB, painting alone seems to have survived many of the other arts: seals in hard stones probably had not been sculpted for nearly a century, [59] and other art forms may also have ceased if they were not in decline: metal vases, ivory carving, stone vase carving, and faience. [60] Architecture, too, seems to have achieved its greatest expressions by the time of the latest frescoes. [61]

It might be possible, therefore, to revise the scholarly consensus: while rings with cult scenes are intimately related to frescoes, sealstones hardly ever copy frescoes, though frescoes can incorporate sealstone compositions. And this revision makes some sense — frescoes can use the individual scenes of seals within large compositions far more easily than seals can excerpt elements from the larger and more narrative compositions of frescoes.

The small size of seals not only focuses our attention on the single subject but also forces our eye inward, inside the subject, to focus on the sculptural manipulation of the stone's surface. And the new horizontal bow-drill opened up opportunities for modelling this surface plastically.

In the years that followed the introduction of this new tool, there is an increased awareness of anatomy and mass, not just in intaglio seals but in all the sculptural arts, [62] whole classes of which, including stone and plaster reliefs, stone vases, and repoussé metalwork, may have been specially developed to respond to the new opportunities.

Seals also participate in this shared appreciation of mass. The Robed Priest Groups [63] carry sinewy men (e.g., the acrobats on Kenna, CS No. 204) similar to the ones that twist in relief frescoes [64] or box on the Boxer Rhyton.

Gold rings present massive bulls (e.g., the sealings from Gournia [HMs 101], Ayia Triada [497—499], and Sklavokampo [613—624 etc.]) [65] similar to those that run on the MM III

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59 J.G. Younger in: CMS Beih. 1, 263ff.

60 R. Laffineur, Les Vases en métal précieux à l'époque mycénienne (1977) 88; J.G. Younger in: E. Thomas (ed.), Forschungen zur Ägäischen Vorgeschichte. Das Ende der mykenischen Welt (Akten des internationalen Kolloquiums 7–8 July 1984 [1987]) 63ff., and K.P. Foster, Aegean Faience of the Bronze Age (1979) 158.

61 E. French in: M.M. MacKenzie – C. Roueché (eds.), Images of Authority (Festschrift Joyce Reynolds) Cambridge Philological Society Suppl. 16 (1989) 120ff. (I am grateful to Paul Rehak for bringing this important survey to my attention), outlines the major architectural history of Mycenae, placing the construction of the Atreus tholos late in LH IIIA1, then the first phase of the citadel walls late in LH IIIA2, the Clytemnestra tholos early in LH IIIB1, and finally the western extension of the citadel walls, including the Lion Gate and the remodeling of Grave Circle A, in middle/late LH IIIB1. This spate of construction, therefore, took approximately three generations and French suggests that each project followed from the preceding with the twin intentions of making Mycenae more impressive and of maintaining a constant work force. Part of this extended building program would also have included the incorporation of early art, the gypsum bull reliefs probably sculpted in MM III at Knossos (n. 66 infra) decorating the Atreus tholos and the Lion Relief probably sculpted in LH II (argued below) surmounting the Lion Gate. This incorporation of Middle Minoan and early Mycenaean art and of early Mycenaean monuments (Grave Circle A) suggests that the IIIA1–B building program was conscious of Mycenae's earlier history and place in the cultural continuum of the Aegean.

62 For a detailed presentation of Minoan perceptions of anatomy, see J. Coulomb, RA 2, 1978, 205ff.

63 Younger (supra n. 37) 59.

64 E.g., the athletes from Knossos, Blocked Corridor (Kaiser, UMR 279f. Figs. 444–448 Pls. 45. 46).

65 J. Betts, Kadmos 6, 1967, 15ff. Figs. 2–3.

Elgin plaques from the Treasury of Atreus [66] and in bull-leaping scenes on the relief frescoes from Knossos. [67] Seals from Mainland workshops, the Mycenae-Vapheio Lion Group (LH I) [68] and its school (e.g., CMS II,3 No. 271, and Kenna, CS No. 202) and the closely related Vapheio Cups, [69] also present these muscle-bound bulls.

Along with the iconography and interest in anatomy and mass, these sculptural arts, especially reliefs, also share the techniques used in sculpting intaglio seals.

Seals in the Robed Priests Groups build the anatomy of their figures using elongated modeled ovals for individual muscles, a dot eye in a reserved hollow, arcs for the mouth and jaw, a full circle for a ringlet of hair, etc.

Fig. 6 Harvester Vase, detail.

Fig. 7 CMS I No. 5.

The elongated muscles are easy to produce in intaglio — the sculptor holds the seal up to the turning drill and rocks it slowly back and forth. It is surprising, therefore, to find these elongated ovals imitated in larger relief. The similarly elongated oval muscles in plaster relief at Knossos [70] are built up by hand plastically and are therefore similarly easy to produce. But, on stone vases, like the Harvester Vase *(Fig. 6)*, these forms must be produced by laborious abrasion.

Again, in seals the lips of the mouth can be expressed as arcs (e.g., CMS I No. 5 *[Fig. 7]*; II,3 No. 13b; VIII No. 110), produced by holding the seal obliquely to the hollow drill; ringlets of hair appear as circles created by holding the seal vertically to the drill. But to produce these marks in relief, raised circles for hair and a lunate arc for mouth and jaw, is

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66 J.G. Younger in: W. Schiering (ed.), Kolloquium zur Ägäischen Vorgeschichte. Mannheim, 20–22 February 1986, Schriften des Deutschen Archäologen-Verbandes IX (1987) 138ff.

67 Kaiser, UMR 270ff.

68 J.G. Younger, AJA 82, 1978, 285ff.

69 Marinatos – Hirmer, CaM Pls. 178–185. Davis (supra n. 15) 1ff.

70 For the athletes in relief plaster: Kaiser, UMR 270ff., Figs. 419. 423 right. 439, etc.

difficult. [71] For the circular ringlet the artist must drill out the center and then abrade away the stone at a distance around it; [72] the arcs of jaw and mouth are even more time-consuming to produce in relief *(Fig. 6)*, for the artist must abrade the stone away on both sides. The Boxer and Harvester Vases seem to be deliberately conjuring up the effect of having been produced from an intaglio mould. And this special mould-produced effect would have been enhanced by the gold foil that probably covered these vases, [73] contributing to them the nuance of repoussé.

Another peculiarity of seals concerns how, in sculpting intaglio, artists must reverse their sense of near and far planes. Details that will, in impression, appear nearer to us, must be engraved deeper into the seal's far surface.

Fig. 8 CMS I No. 10.

Usually, glyptic artists have this concept firmly in mind; but the artists of the Mycenae-Vapheio Lion Group maintained one convention that contradicts this principle. When they sculpted lions (e.g., CMS I No. 10, *Fig. 8*), they invariably carved the cheek deeper into the stone than the mane. On the seal itself, then, the mane stands naturally out toward the viewer and the cheek sinks into the farther plane; but in impression, both are reversed, so that the cheek stands out above the mane, like a fish gill.

This reversal of convention, restricted to the Mycenae-Vapheio Lion Group and to the objects under its influence, occurs not just on seals. We should expect it in the Group's

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[71] Both the Chieftain Cup (Marinatos – Hirmer, CaM Pls. 100–102) and the Sanctuary Rhyton (Marinatos – Hirmer, KTMH² Pls. 108–110) carry comparatively shallow reliefs, without much energy expended on time-consuming abrasion; as a result, the figures are flat and dry.

[72] See the boxer's hair on the Boxer Rhyton (Marinatos – Hirmer, CaM Pl. 107 lower right). Kaiser, UMR 281 Fig. 454 extreme right, describes a possible griffin's neck ornament of spirals with central hole drilled and the curves set off by abrasion.

[73] Warren (supra n. 30) 162f. notes gold leaf adhering to two relief vases, HM 993 (p. 86) a rhyton from Palaikastro with charging boar, and HM 2764 (p. 87) the Peak Sanctuary Rhyton from Kato Zakro. An animal head (bull?) rhyton fragment in the HM 3323 also preserves substantial amounts of gold foil.

moulded products from the Mycenae Shaft Graves, whether they are repoussé or directly produced from moulds: the lions on the gold box, the gold sword pommel, and the gold lion head rhyton.

Even more illogical: some two-dimensional articles imitate the Group's fish-gill mane: the lions on the niello daggers, and the painted lions running on the hull of ship 2 in the Ship Procession fresco in Akrotiri's West House. [74]

And it is even more peculiar that this same convention should appear on contemporary sculpture in direct relief: the ivory sword pommel from ShGr IV and the stele with lion from above ShGr V.

Fig. 9 Mycenae, Lion Relief.

Fig. 10 CMS I No. 46.

There occurs another remarkable instance where the intaglio techniques of seals have influenced a piece of sculpture in direct relief: the Lion Relief at Mycenae *(Fig. 9)*. The Lion Relief has often been compared to the sardonyx lentoid CMS I No. 46 *(Fig. 10)* from Mycenae ChT 8 (probably belonging to the earliest burial there), [75] especially on iconographic grounds, [76] but it is worth noting that the two are also similar in technique.

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74 For the lion on the hull: Morgan, MWPT Pl. 56.

75 Sakellariou, ThTM 63ff. Both CMS I Nos. 45 and 46 were found near the head of the skeleton in the cist, not among the latest offerings in the tomb which included the Mainland Popular Group seal CMS I No. 47 from below the later wall in the chamber.

76 Younger, Aegean Seals III 62ff. Younger (supra n. 60). The general pose, two animals antithetic and rampant (Younger, Iconography, PT 31) on a structure is found frequently: HMs 138 (Gill, KSPI no number; KN Ws 8498; lions? on in-curved altar); HMs 233/Gill, KSPI R88 (collared lions on in-curved altar, *Sun* and dots above); HMs 419/Gill, KSPI U107 (lions salient on rocks, all on *Shrine*); HMs 659/Gill, KSPI U117 (birds flank in-curved altar); HMs 577/AT 49 (lions? on an in-curved altar); cf. HMs 42/KZ 128 (two lions in PT 28B flank a column atop an in-curved altar) and HMs No. unknown/AT 96 (griffins rampant on nothing flank a *Papyrus*).

There are of course important differences between the two works, but these are few. For the hindlegs, the lentoid gives a fulsome rendering of all three sections, the massive thigh, the strong tibia of the lower leg, and the more delicate upper foot that ends in claws; the relief cuts the hindlegs short, concentrates on a strong thigh, omits a real tibia but marks where it joins the foot (the tarsus) with a pair of 'bracelets', below which there is a short, almost human foot with a high arch and wedges for paws.

The similarities between lentoid and relief, however, are more impressive. Both represent massive but sleek lions with a profiled belly, saphena vein on the hindlegs, and dotted tail tip. In both works the forelegs are rendered with the same conventions: they have a columnar shape with a profile line in back ending at the top with a dot at the elbow; a pair of horizontal 'bracelets' (like those on the relief's hindlegs) effects the joint (carpus) at the wrist.

The saphena vein and the columnar leg with profiling line and elbow dot are common sealstone conventions, especially in seals of the Mycenae-Vapheio Lion Group (e.g., CMS I No. 10) and Almond-Eye Groups (e.g., CMS XII No. 237). But the 'bracelets' at the wrist, articulating the joint are known only on four seals and nowhere else, as far as I know: CMS I Nos. 46 from Mycenae ChT 8 (earliest? phase) and 89 from Mycenae ChT 58, its twin lentoid from recent excavations at Elatia (Alonaki, Phokis; LH I–II context), and Kenna, CS No. 315, a seal found with LM II pottery at Knossos. On these seals, the 'bracelets' complement the extremely formal rendering of the foreleg, while the more expressive hindleg, with its separated femur and tibia, receives dots for the tarsus. On the relief, the hindlegs receive a more meaty treatment, solid and muscled down to the feet; the 'bracelets' that indicate the tarsus joint seem conventional in comparison and out of place there.

These similarities between seals influenced by the Mycenae-Vapheio Lion Group (LM/LH I–II) and the Lion Relief illustrates the latter's dependency on seals, as if the relief were an impression of a seal writ large. [77] These similarities, too, ought to suggest a contemporaneous date, LM/LH II, for both the Lion Relief and the seals (CMS I No. 46 probably from the earliest use of ChT 8, the Elatia lentoid from a LH I–II context; and Kenna, CS No. 315 from a LM II context at Knossos).

Dating the Lion Relief separately from, and much earlier than, the Gate is not a new idea. [78] Stanley Casson, on technical grounds, dated the relief earlier than 1400 and the Italian scholar Ferri gave it a date around 1500 B.C., identifying it as the plug to a tholos's relieving triangle.

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[77] P. Åström – B. Blomé, OpAth 5, 1965, 159ff. give a detailed historiography of the relief (add M.C. Shaw in: Φίλια Ἔπη εἰς Γεώργιον Ε. Μυλωνάν Α [1986] 108ff.). They see the influence of seals on the relief (p. 188): "The lion relief is to some extent in its clear-cut style a magnified version of the scenes on the gems." They also cite several other scholars who see the same influence, e.g., Persson (p. 170) and Mylonas (pp. 172f.).

[78] Casson, The Technique of Early Greek Sculpture (1933) 30 with n. 3; 33f. (style earlier than 1400 B.C.). Åström – Blomé (supra n. 77) summarize an article by S. Ferri, RendLinc VIII, 8.7 (July–October 1954) 410ff.: the relief, datable around 1500 B.C., "once adorned the gate to a tholos above the shaft graves".

CONCLUSIONS

The aesthetics of seals seem always to have turned on their small size, their function, the relation of their subject to the frame, and their duality as intaglio producers of relief. Seals can serve as comparanda in iconographic studies only so far as they present certain set images, motifs, and compositions. But if the influence of seals on the other arts is to be fully appreciated, their unique aspects, as a functional imprinting object and as a sculptural duality (intaglio producers of relief), must be considered. Otherwise, we miss how their early connection with textiles might have provided a source for many early patterns as well as for the administrative practice of stamping; how the need for legible writing might have led to the development of the early figural image; how intaglios as moulds might have led to the emergence of other mould-related objects like repoussé and mould-produced jewelry; how the small size of seals fostered a focus on the isolated image and on the internal balance between composition and field; and how intaglio techniques get imitated in direct relief sculpture.

It is in these terms, therefore, that we can truly appreciate the enormous influence of seals on the other arts; and it is in these terms that seals, though small, were truly a monumental art form.

AKADEMIE DER WISSENSCHAFTEN UND DER LITERATUR · MAINZ

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Begründet von FRIEDRICH MATZ. Im Auftrag der Kommission für Archäologie, Vorsitzender Bernard Andreae, herausgegeben von INGO PINI

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